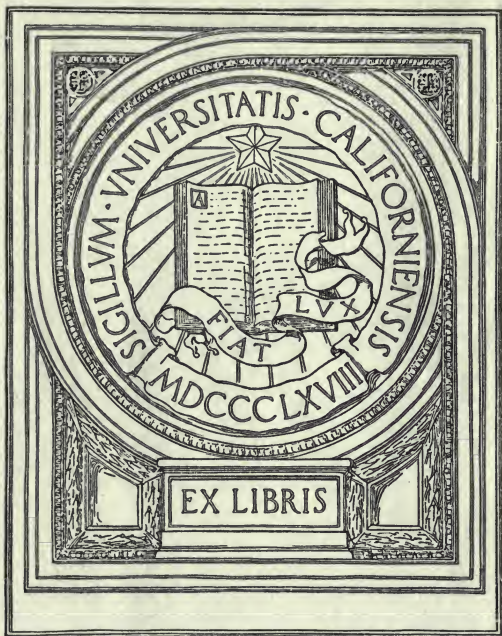


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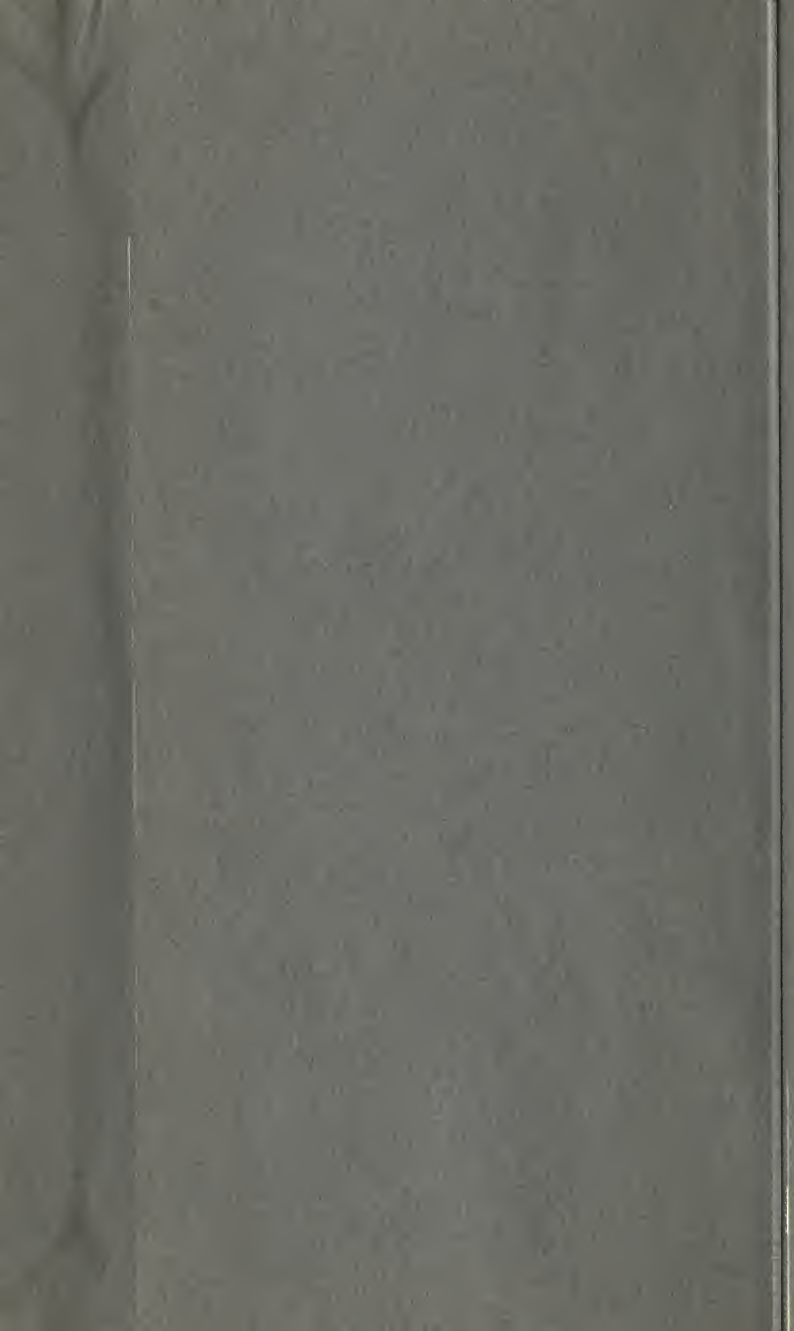


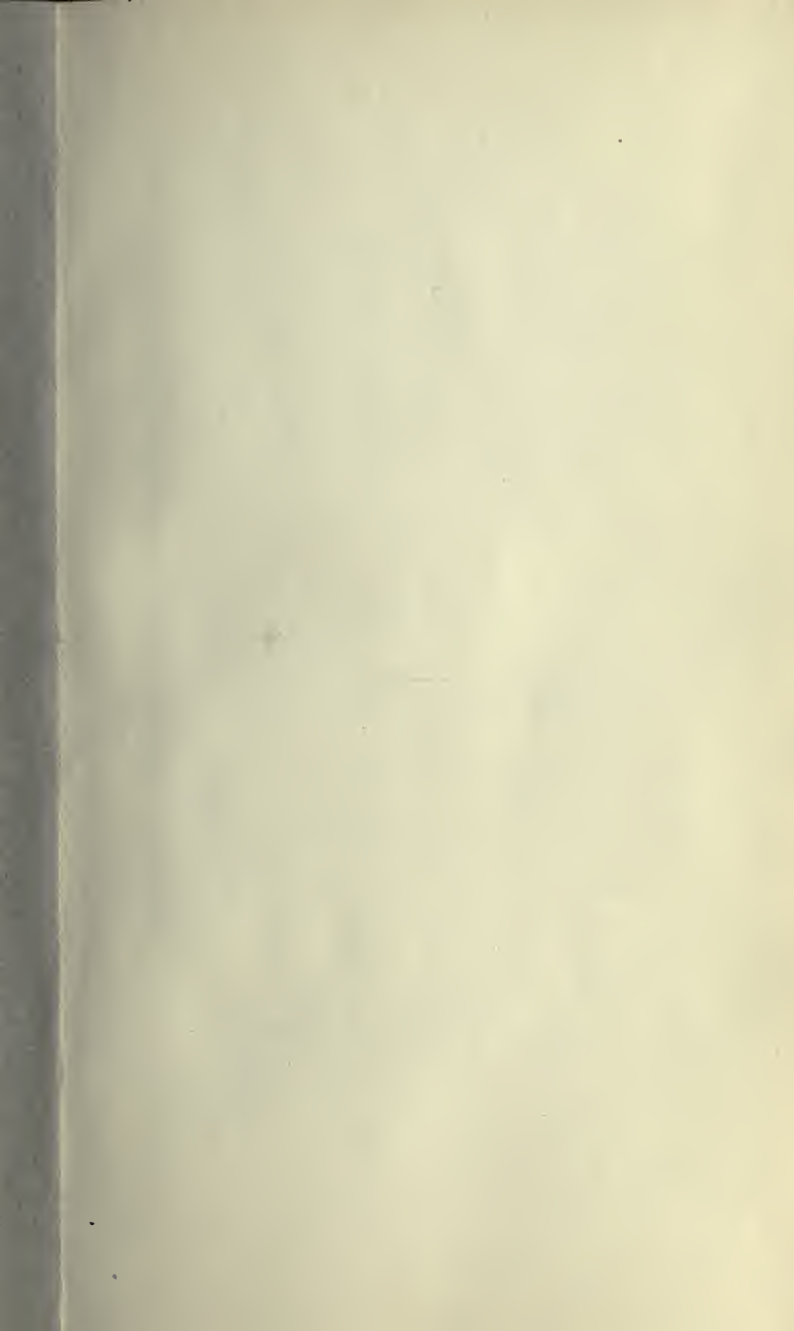
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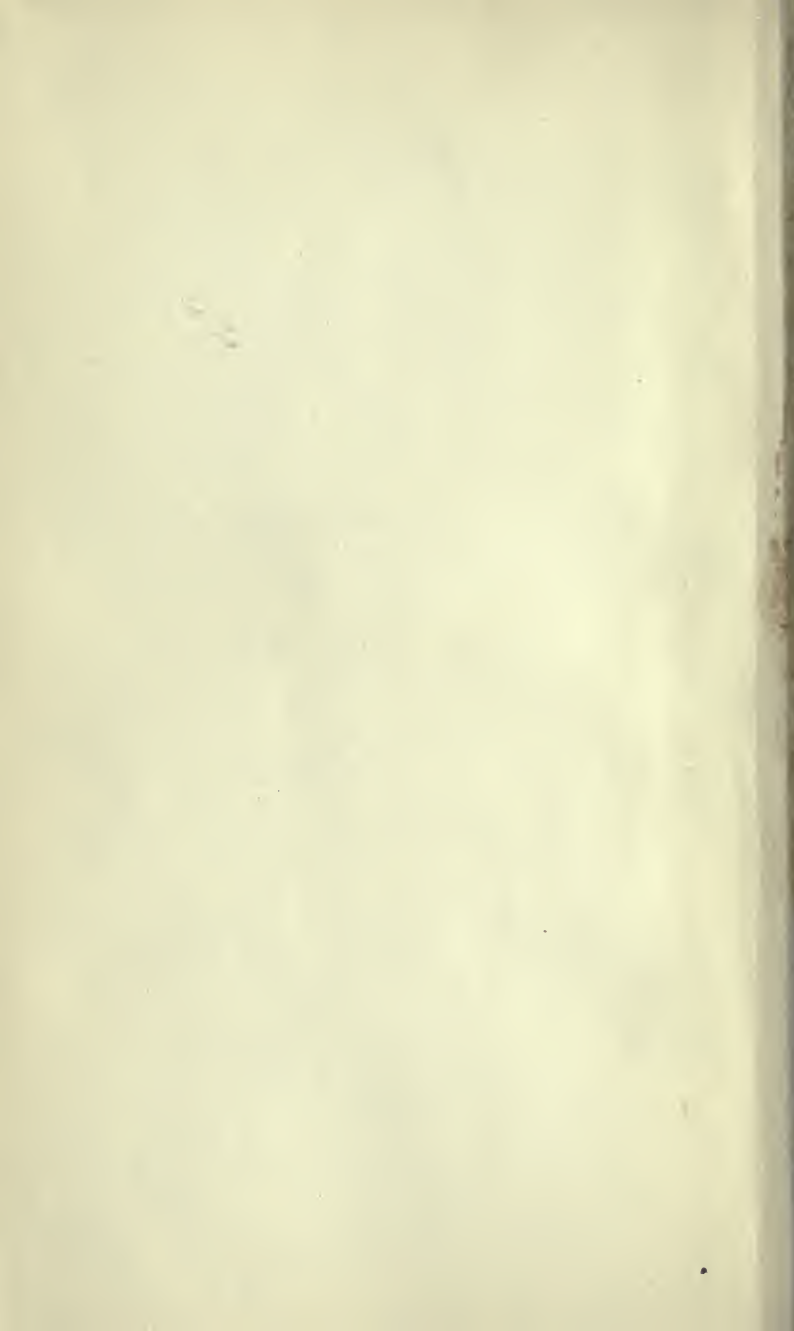


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CONTENTS.

	PAGE
Introduction	1
CHAPTER I.	
Definition of Exchange—Points of similarity between the domestic and the foreign bill—Some operations in foreign exchange more or less intricate—Magnitude of the business in exchange—Large capital not essential for success in ordinary operation—Transactions in commercial bills recommended to banks.....	4—11
CHAPTER II.	
Domestic exchange—Its origin, termination and functions—How balances resulting therefrom are adjusted—Transfers of money at a minimum of cost—Periodicity of movements of currency—Notable instances of transmission of gold through the mails and of telegraphic transfers through the Treasury.....	12—18
CHAPTER III.	
Commercial foreign exchange—How it originates and terminates and how it is negotiated—A hypothetical translation in cotton bills as an illustration—Profitable results usually obtainable from operations in commercial bills.....	19—23
CHAPTER IV.	
Commercial exchange drafts against commodities shipped on foreign order—An export of flour taken for illustration—Documents accompanying the draft explained—How the profit is realized	24—31

CHAPTER V.

- Profits of foreign exchange business—The margin narrow in cities but larger at interior points—Suggestions for the employment of country balances—The South American field open for exchange operations..... 32—36

CHAPTER VI.

- Erroneous forecasts of exchange conditions—Effect upon the market of the failure of the corn crop in 1901—Derangements resulting from over-sold commercial bills..... 37—40

CHAPTER VII.

- The study of the science of exchange—Paucity of text books—General use of exchange tables—Norman's system of calculations—How fixed pars of exchange are computed in his Cambist.. 41—46

CHAPTER VIII.

- Tate's manual of foreign exchanges—Mathematical computations facilitated by the establishment of the single gold standard—The coinage of Great Britain..... 47—52

CHAPTER IX.

- International gold certificates—A device for substituting for gold drafts which could be availed of by tourists—Feasibility of the plan..... 53—56

CHAPTER X.

- The origin and history of the Troy pound—Great Britain's standard of weight for three and three-quarter centuries—Its existence for two hundred and sixty years without official recognition—A copy of the standard in use in our mints..... 57—61

CHAPTER XI.

- The metric system—Experimentation for two and a half centuries before the attainment of perfection—The gramme substituted for the Troy grain in mint assays..... 62—67

CHAPTER XII.

- Effect of money rates upon exchange—Credits advantageously employed in Europe in 1896—How foreign loans were then effected through investment bills—A reversal of monetary conditions in 1901 caused large borrowing of foreign capital 68—72

CHAPTER XIII.

- The influence of exchange upon rates for money—How the London discount market is sought to be controlled by the Bank of England—Withdrawals of gold retarded by an advance in discounts—Sensitiveness of money to exchange conditions 73—76

CHAPTER XIV.

- Consideration of the International Trade situation necessary in exchange operations—Neutralizing effect upon favorable trade conditions of a return movement of securities..... 77—81

CHAPTER XV.

- The International balance of trade—How favorable balances are currently liquidated—No accumulation of foreign indebtedness resulting from trade movements—Securities the principal medium for adjustment of balances..... 82—87

CHAPTER XVI.

- Why Germans are experienced Cambists—The system of instruction in schools thorough—Careful training in counting houses and banks—How imperfections in the early education of Americans can be remedied..... 88—91

CHAPTER XVII.

- Arbitration of exchange—Developments of this branch of exchange operations—Illustration of arbitration through London on Paris—How gold was profitably exported hence to the French

capital in 1901—Accurate information and expert skill essential for success in such operations—Difference between arbitration and arbitrage negotiations..... 91—97

CHAPTER XVIII.

Suggestions for exchange students—Desirability of obtaining positions where opportunities for practical knowledge may be had—Verification of exchange calculations useful—The basis for computations of fixed pars of exchange—How close quotations are figured in transactions in bills.. 98—103

CHAPTER XIX.

Computations of French exchange—Peculiarity of the quotations for francs—Small supplies of this class of bills in our market—Illustrations of indirect remittance to Paris through London....104—108

CHAPTER XX.

German exchange computations—Methods of quoting reichsmarks—Arbitration operations through London—The calculations in Brooks' tables commended 109—112

CHAPTER XXI.

Monetary units and pars of exchange of various Continental and Asiatic countries—The basis on which pars are computed.....113—118

CHAPTER XXII.

The trans-Atlantic cable and exchange operations—Every commercial centre of the world now in telegraphic communication—Arbitrage and arbitration transactions facilitated—The element of chance entirely eliminated—Cable tolls reduced to a minimum—Cable transfers of gold—How the Philippines indemnity was paid.....119—124

CHAPTER XXIII.

Advantages of the proposed trans-Pacific cable—Obstacles to its construction now overcome—

Length of the sections of the new line—Our commerce with the Orient will be promoted by the installation of the cable and exchange transactions facilitated—Manila the base for our Oriental commercial and financial operations...125—128

CHAPTER XXIV.

Financial and exchange operations in the Orient—The business controlled by foreign banks—How exchange is negotiated—A recent movement of gold hither from Australia explained..129—134

CHAPTER XXV.

How the gold basis for exchange is calculated—The weight and fineness of the chief monies of account in sixteen gold standard countries—Values as stated by the United States Mint Director—The price of gold established by law and uniformity thereof secured.....135—141

CHAPTER XXVI.

The country's accumulation of gold—While European banks jealously guard their stacks of the metal our Treasury holdings thereof are unprotected by restrictive regulations—Gold for export supplied at only nominal charge for bars—Facilities extended to importers of gold at Pacific coast points.....142—146

CHAPTER XXVII.

Tables for the ready conversion of interest into American currency—Illustrations of the method of making calculations—The use of decimals in sterling exchange computations—Examples for conversion and of operations in interest of duty on importations.....147—152

APPENDIX.

Foreign exchange elucidated in a lecture before the students of the University of Chicago by H. K. Brooks.....153—184



FOREIGN EXCHANGE A NEGLECTED FIELD IN AMERICAN BANKING

INTRODUCTION

In June, 1901, "The Financier" began the publication of a series of articles upon Foreign Exchange, which were continued until February of the following year. The articles attracted much attention and, in response to numerous requests, the publisher of this paper decided to issue the articles in book form, believing that the interest which had been manifested in them would justify such republication.

This work is not a text book on Foreign Exchange. It is an elementary treatise, explaining, in simple language, the essential principles of this science, the basis for and the methods of computation of pars of exchange, and how operations in exchange in their various forms are conducted. The expositions of the manner of ascertaining pars of exchange are one of the features of this work, which is almost entirely new in the sense that it has not before been so directly and clearly presented by any of the Cambists, or skilled writers on the science, whose publications have hitherto been issued, with, perhaps, the sole exception of Norman, who sought to introduce a universal system of computations of exchange based upon fixed constants. Aided by the

above noted exposition of the method for the ascertainment of the pars of exchange, which pars it is shown, are based upon the unvarying, because established by coinage laws, weight and fineness of the gold contained in the monetary unit of the different commercial countries of the world, having a gold standard, the student is enabled at once to grasp the underlying principle of exchange operations, and the working of the various problems in this science is thereby greatly facilitated. Among the other of the many important features of this work is the chapter on International balance of Trade. This controverts the hitherto popularly maintained theory of an accumulation of the credit balances which result from the net export movement of merchandise and gold and silver after the deduction from such balances of what is called the "invisible balance"—by which is meant the variously estimated sums of the items which are chargeable against the export movement of commodities; the expenditures of tourists and of Americans residing abroad and of interest on investments in American securities held in Europe. Instead of there being such an accumulation of credit balances, it is shown that there is constantly in progress, through the operations of foreign bankers, current liquidations of such balances either with securities or otherwise, so that at no time can it be truthfully said that there exists an unliquidated balance, other than that which is in process of adjustment through maturing exchange drafts. Still other important features of the work are chapters on the dominating influence of money upon exchange and of exchange upon money; on the revolution wrought

by the Transatlantic cable in the conduction of exchange operations; on American banking in the Orient and its expected promotion, through the projected Trans-Pacific cable, and on the scientific study of exchange as suggested by modern Cambists.

The aridity common to most works of an educational character is sought to be relieved in this book by the introduction of chapters containing subjects of general interest, such as the origin of the Troy pound and the gradual process through which this standard of weight was brought to perfection; the origin and history of the metric system; the suggestion of a plan for International gold certificates, which are intended to minimize the movement of the metal between this country and Europe, and to be used for the convenience of tourists, and accurately computed tables for the ready conversion of English into United States currency.

If through this publication bankers in the interior or elsewhere in the country shall become so far interested in the business of exchange as to embrace the opportunities which are almost constantly offered for profitable operations therein; and if junior employes of banks shall, through the perusal of this work, be encouraged thoroughly to study this science with a view to obtaining the equipment necessary for the successful conduct of the business, the labors of the author and the enterprise of the publisher will have been amply rewarded.

CHAPTER I.

DEFINITION OF EXCHANGE—POINTS OF SIMILARITY BETWEEN THE DOMESTIC AND THE FOREIGN BILL—SOME OPERATIONS IN FOREIGN EXCHANGE MORE OR LESS INTRICATE—MAGNITUDE OF THE BUSINESS IN EXCHANGE—LARGE CAPITAL NOT ESSENTIAL FOR SUCCESS IN ORDINARY OPERATIONS—TRANSACTIONS IN COMMERCIAL BILLS RECOMMENDED TO BANKS.

The definition of exchange is barter. Centuries ago, before tokens representing values were devised, business transactions between individuals were conducted through the exchange or barter of one thing of value for another thing of different value. Then followed the substitution of representatives of value, called money, for the thing or things bartered and gradually the science of exchange was evolved, money or negotiable instruments, adjustable with money, being the intermediary.

Bankers as well as dealers in commodities or other things of value are more or less familiar with operations in domestic exchange throughout the various processes of negotiation from the creation to the termination of the instrument. Hence there should be little difficulty in acquiring a knowledge of the principles which govern foreign exchange transactions. The two classes of exchange are simi-

lar as regards origin and final settlement, the domestic bill being the instrument representing the value of a thing locally treated while the foreign bill represents the value of the thing, whether it be a commodity or a security passing from the possession of a domestic to that of a foreign holder. In the one case the operation results in the transfer of a credit between domestic points; in the other case such transfer is made between a domestic and a foreign point or centre.

Ordinary forms of foreign exchange operations are easily understandable by all who handle the domestic draft and they are capable of being successfully conducted by banks and also by individuals who have opportunity and facilities therefor. There are, however, other forms of exchange operations which are more or less intricate by reason of the fact that different currencies and monetary and trade conditions are almost constantly encountered, making necessary the possession of accurate knowledge of such conditions in order to take advantage of opportunities for the profitable conduct of exchange operations. Moreover technical training and practical experience are indispensable to success in the more intricate operations in exchange and these can be acquired only through study and close observation.

Because of these intricate details, expert managers of foreign exchange departments in banking houses are always in request, commanding salaries usually far greater than those in almost any other department of banking. Therefore there would seem to be a strong incentive for young men who are entering, or who have already entered, upon a

banking career, to devote their attention to a thorough and systematic study of the methods of conducting this branch of business.

Until within a few years the handling of exchange was almost wholly monopolized by foreign banking houses, who built up an enormous and highly profitable business and established agencies and secured correspondents in every commercial and financial centre of the world. The success which attended these enterprises naturally invited competition, and latterly many American banks of deposit and other financial corporations have entered the field through the establishment of exchange departments, enlisting the co-operation of their country correspondents and forming indirect alliances with small banks at distributing centres. This branch of their business has already grown to be highly important. There would seem to be no good reason why banks located at distant domestic points, through which grain, cotton, provisions, manufactured goods or other exports move to the seaboard, should not take measures to intercept some of the foreign exchange which is drawn against these exports, and thus obtain a share of the business resulting from this movement.

The magnitude of the volume of business in foreign exchange is indicated by the fact that the international commerce of the country, represented by merchandise exports and imports, has grown from \$1,687,416,797 in the calendar year 1896, to \$2,345,801,975 in 1901, and is still expanding. The amounts it may be observed, do not include the movements of gold and silver, against which exchange is also drawn; neither do they include the vast and un-

known volume of securities of various kinds which constantly move between this country and Europe, the expenditures of foreign tourists and of Americans residing abroad and the necessary outlays incident to the transportation of the country's commerce, all of which add to the volume of exchange transactions.

An impression doubtless prevails among banks generally that much capital is essential for the successful conduct of the foreign exchange business, and hence that those banking institutions which have only sufficient capital for their domestic requirements should refrain from attempts to engage in foreign exchange operations. The amount of capital which is required for conducting business in foreign exchange depends, of course, upon the extent to which the banker becomes committed, through his efforts to compete with rival houses in contracts incidental to, though not necessarily a part of, the business of operating in foreign exchange. For example, it may be advantageous to a banker to deal largely in speculative transactions in stocks or bonds through the cable or through other exchange drafts, thus conducting what is known as an arbitrage business, which may at times require the use of a large amount of capital. Or there may be occasions when he will have opportunities to participate in the negotiations of new securities or those which have not been placed either upon the domestic or the foreign markets, and while awaiting the digestion of these properties he will be required to tie up a certain amount of his capital. If such capital were not large this temporary employment of it might embarrass other

operations. Such cases, however, are exceptional, and out of the great number of exchange houses in this country which handle foreign bills, comparatively few indulge in operations of this magnitude. Indeed, by far the great majority of these bankers limit their business to buying and selling of exchange against commodities and to operations incidental thereto. There may be times when exchange which has originated in the above noted arbitrage or other operations will be traded in by the smaller houses, but such trading does not involve any increased capital beyond the amount required for other exchange transactions. Generally speaking, houses with comparatively small capital but having sufficient credits with their foreign correspondents, are quite successful in the foreign exchange business. By credits we do not mean the standing or reputation of the house, based upon business connection or influence or established through references. What is meant by the term credits is cash or the proceeds of operations in exchange drafts, which cash, until withdrawn, is at the disposal of the house represented by the bill whose function has terminated in its payment.

The basis for a commercial bill of exchange is a commercial transaction of an international character, which transaction consists in the purchase of commodities in one country for export to another country; and the exchange draft represents the money value which is due the exporter of the commodities. The draft either accompanies or closely follows the shipment of the commodities, and when the draft, after being accepted, is eventually paid, the proceeds form a credit against which the

original maker of the draft or the person to whom it may be sold may, at his convenience, draw. It will be observed that the outlay required for such a transaction as the purchase of a commercial bill drawn against an exported commodity depends upon the value of this particular consignment, and as such shipments are of various quantities and values the buyer of the bill has a wide range for selection. Ordinarily the commercial bill drawn against the commodity is paid within ninety days from the date of the shipment. The transaction may then be closed by the purchaser of the bill, who may sell the draft which is made against the credit which has resulted from the payment of the commercial draft; or the purchaser of the bill may await returns from the draft which he makes against his credit. In the latter case the final closing of the transaction will probably require an additional thirty days. It should be noted, however, that if at any time between the acceptance of the commercial bill and its payment, the purchaser of the draft should desire for any reason to close the transaction he can dispose of his claim in the market and almost always at a profit, for as the bill approaches maturity it appreciates in value. The capital required for an operation in exchange such as is here described, is limitable, as above noted, by the amount of the transaction.

The proceeds of the bill can, if desired, be promptly drawn for and reinvested in another transaction of a similar character, and thus, during the export season, a number of profitable turns may be made without requiring any greater amount of capital than was necessary for the initial transaction. It

will be observed also that the process of trading in exchange is very similar to that employed in making time loans or in the purchase of commercial paper, both of which operations are, of course, familiar to bankers. In the case of time loans on collateral, and of purchases of commercial paper, however, the transactions must run to maturity, while in the case of the purchase of a bill of exchange the draft can be realized upon at any time after acceptance. In addition to the operations in exchange above described there are others which may closely follow the establishment of the credits resulting from the purchase of commercial bills of exchange. The long bill, which may be drawn against the credit, can be loaned against collateral, thus making a sterling loan. If, instead of a long, a short bill should be drawn against the credit, it can be sold either to remitters or to parties who may need exchange for other purposes. Indeed, with credits established in the manner indicated, they may be used in various profitable ways, and banks engaging in the business will soon find opportunities for thus employing their capital, greatly to their advantage.

Considering the fact that during many months of the year the country bank balances earn scarcely anything at home, it is not surprising that the dividend returns of the majority of national banks should be so meagre. In those periods of the year when crops are growing, institutions in the interior transfer more or less of their locally unemployed balances to reserve centres, where a nominal rate of interest is paid. These are the seasons when tentative operations in foreign exchange can be made by such country banks, and in this way a

profit can be extracted from the transaction, which gain, though it may be small, will at least go a little way toward increasing the aggregate dividend return to stockholders of the institution. Besides this advantage there will be the experience acquired in handling foreign exchange, and an incentive on the part of the bank's managers to seek opportunities for operations in exchange drafts. The results of a single season's transactions in this new line of business would doubtless prove so satisfactory that it would be made an important department of the bank. That banks in the interior are gradually engaging in the more simple forms of the foreign exchange business, buying and selling drafts and issuing letters of credit, is shown by the announcements which many of them are making to patrons in their advertisements, and it is probable that during the current export season the number of these banks, especially those which are located in the cotton and grain sections of the country, will increase.

CHAPTER II.

DOMESTIC EXCHANGE—ITS ORIGIN, TERMINATION AND FUNCTIONS—HOW BALANCES RESULTING THEREFROM ARE ADJUSTED—TRANSFERS OF MONEY AT A MINIMUM OF COST—PERIODICITY OF MOVEMENTS OF CURRENCY—NOTABLE INSTANCES OF TRANSMISSION OF GOLD THROUGH THE MAIL AND OF TELEGRAPHIC TRANSFER THROUGH THE TREASURY.

Theoretically, domestic exchange and foreign exchange so closely correspond in their origin and functions as to enable a student of the one to obtain a clear understanding of the underlying principles governing the other. While the functions of the two classes of exchange are similar, their respective spheres of operation differ. Foreign exchange is employed to settle transactions between this country and the rest of the world, while domestic exchange settles such transactions within more circumscribed limits. There is at times a plethora or an accumulation of exchange on New York at certain points, and a deficiency in the supply at other points, or vice versa, this city being the financial centre of the country, as London is the international financial centre. There is also at times a plethora and at others a dearth of exchange between New York and London. In each case the plethora is reflected in rates for exchange at a dis-

count, while the dearth is shown by the premium in the rates, this discount or premium being based upon the cost of the transportation of the actual money employed and the time cost involved in making the settlement. In some sections, particularly in the south, rates for exchange fluctuate from premium to discount, according to supply and demand and facility of movement with remarkable regularity, and this change also reflects the extent of the banking facilities of the section as well as the periodical movement of special crops. In other sections of the country, notably at Western centres, rates for exchange move only slightly from the par point between the crop seasons unless there should be unusual monetary disturbance at New York.

Regarding New York as the financial centre of a great commercial domestic zone, we find embraced within this area zones of more or less importance representing manufacturing, agricultural, mining and mercantile enterprises, each zone having its own centre. Exchange originating in these smaller zones moves to and through the centres thereof, and should the function which was intended at its creation not be performed in its transit, the draft eventually reaches its ultimate destination, where it is cleared or otherwise settled.

The bill may, under some circumstances, perform the function intended at its creation and then pass on to its redemption centre. For example, a draft upon New York may be bought at Indianapolis for the purpose of discharging a debt at Cincinnati or Chicago. The purchase may be made either because the Indianapolis bank has, at the moment, no Cincinnati or Chicago funds, or because exchange on

New York may be in request. In this case the draft is forwarded to the creditor at the intermediate point of Cincinnati or Chicago, where the debt will be discharged, and the creditor may then forward the draft to New York for final payment. Exchange originating at the centres, such as New York, for instance, passes onward through the various zones to the point upon which it is drawn, where it is finally paid. Thus exchange is constantly kept in circulation and its volume is measured by the commercial and business transactions of the country. Exchange originates with commercial or business negotiations, and it terminates by the settlements in cash of the balances involved in the monetary transactions at the different clearing houses of the country, where these as well as other forms of indebtedness are adjusted. Banks drawing domestic exchange must, as a matter of course, keep with their correspondents at the centres at which the exchange is made payable, cash balances or reserves sufficient in amount to meet their obligations, and the extent of this balance or reserve will depend upon the volume of exchange business conducted by the bank. If this reserve is not reinforced or maintained by collectible drafts it must be reinforced through remittances of money.

Whenever, by reason of a deficiency in reserves or in the supply of collectible exchange at a given point, money is required to be forwarded to that centre to meet balances; or whenever, in consequence of a derangement of equilibrium from any cause, it is desirable to transfer bank balances, the banker has a choice of several methods of transmission. As express charges are usually high, the

movement by this method is the last resorted to. Sometimes, though not often, the recipient of the money is so anxious to obtain it as to be willing to defray either the whole or a part of the express charges. In some cases competition for country deposits is so great among certain institutions in the larger cities that these banks not only offer to pay a high rate of interest for such balances, but to assume the cost of transmission both ways, in order to secure the account. Another method of transfer resorted to by banks at large centres is registered mail transmission. This, however, involves the necessity of procuring notes of large denomination, thereby reducing the bulk of the package, and it is not always possible to obtain such notes. When transfer is made by mail the cost is usually limited to the postage upon the weight of the package, the registration stamp and the fee for insurance while in transit. Still another method is the assorting out by the transmitting bank of circulating notes of other national banks which may have been received in the course of business, and forwarding these notes to the redemption bureau at Washington, which is done at the expense of the note-issuing bank. In return the remitting bank receives legal tender through any Sub-Treasury which may be designated by the bank, and in this way funds are placed with the institution's correspondents at convenient points, where the money is available as reserve. Through this method of transfers the cost of transmission by the remitting bank is entirely eliminated, the note issuing banks paying all charges on note redemptions. As the cost of transporting silver dollars is borne by the Treasury

Department, this method of transmission is frequently resorted to during crop-moving seasons.

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Movements of money at a minimum of cost are often effected between centres of zones. For example, a Chicago bank may arrange for the transfer of currency from Cincinnati, giving in exchange a draft upon its New York correspondent, which draft will be deposited to the credit of the Cincinnati bank with its correspondent in New York. This movement would involve only a comparatively slight express charge for the transfer of currency from Cincinnati to Chicago, the draft given in settlement passing through the mail. Such movements as these are said to be frequent, they are of great convenience to banks, particularly in western, northwestern and southwestern zones, and the volume of money so transmitted is often large.

Movements of currency between banks in the south and those at northern centres are notable for their periodicity. This is due to the fact that the capital of these southern banks is comparatively small, or sufficient only for ordinary needs, and during crop movements the requirements are so great that drafts have to be made upon northern correspondents based upon bank loans or re-discounts. When these requirements are satisfied the return flow of currency begins, and in the majority of cases the express companies are the carriers. Competition of coast line water routes, with overland express lines will account for the lower rates which are sometimes observable.

Until the resumption in 1899 of the issue of gold certificates by the Treasury Department, it often became necessary to supply deficiencies in money

at western points by transmitting gold. Express charges for this service were high, and, consequently, resort was had to the mails. The coin was enclosed in cartons containing \$1,000 each, weighing 3.6857 pounds, or 58.9712 ounces, the regular postage on which was 59 cents, while 8 cents additional was paid for the registration stamp. By this method gold coin was transferred between distant points, and it has been brought from San Francisco to New York at a much less cost than by express and with equal safety. Since the issue of gold certificates, however, transportation of gold by mail has become unnecessary, gold certificates of large denomination, which can be sent by mail, being easily procurable.

In March, 1902, a syndicate of bankers in New York, who had a large payment to make in San Francisco, arranged with the Treasury Department for the transfer of \$20,000,000 gold to the latter city to save the maximum cost of exchange, about \$1.50 per \$1,000 on that point. The transfer was, however, not made by these bankers, they obtaining sufficient exchange, at a minimum of cost, from express companies and bankers who preferred to make a reduction in their rates rather than have the gold transferred through the Treasury. Subsequently these bankers themselves transferred \$4,000,000 gold through this medium for the purpose of reimbursing the drafts which they had sold to the syndicate. The cost of the transfer was 75 cents for each lot, this sum defraying the expense of the telegram. The gold was deposited in the New York Sub-Treasury and the transfer order was paid at San Francisco. Had the above noted

amount of \$20,000,000 been transferred, the New York money market would have been seriously deranged by the withdrawal of this sum from the banks, and this was probably one reason why the bankers representing San Francisco institutions made concessions in their rates for exchange.

CHAPTER III.

COMMERCIAL FOREIGN EXCHANGE—HOW IT ORIGINATES AND TERMINATES AND HOW IT IS NEGOTIATED—A HYPOTHETICAL TRANSACTION IN COTTON BILLS AS AN ILLUSTRATION—PROFITABLE RESULTS USUALLY OBTAINABLE FROM OPERATIONS IN COMMERCIAL BILLS.

Foreign Bills of exchange are divided into two classes—commercial bills, which are drawn against commodities such as cotton, grain, provisions and other products, and bankers' bills, which are drawn against the credits which result from the payment of the commercial bill, and also against securities when these take the place, or rather supplement the use of exchange as a medium of settling accounts between parties residing at a distance from each other. When gold moves between countries it is as an article of merchandise, and bankers' bills are drawn against the movement in the same manner as commercial bills would be drawn against a movement of commodities, though the drafts against gold would be payable in the briefest possible interval of time to save interest charges which, under the conditions calling for such an unusual movement, would be abnormally high.

There is a further distinction which should be noted between commercial and bankers' bills, and

that is that the former are always drawn payable in from sixty to ninety days, or perhaps, in extreme cases, even longer, while bankers' bills are drawn in three classes—sixty or seventy, and sometimes, though not often, ninety days, and demand or sight bills and cable transfers, which latter call for immediate payment.

The process by which a foreign commercial bill of exchange is created and reaches its termination may best be illustrated by a hypothetical transaction in cotton, this commodity being selected because, owing to the magnitude of the export movement, it is one of the most important of the exportable commodities of the country. The selection is also made because the calculations preliminary to the execution or the creation of the commercial bill drawn against the export are somewhat intricate, while those which are necessary to the creation of a bill against almost any other exportable commodity are comparatively simple.

Cotton is usually bought for prompt export upon an order which calls for the staple of a certain grade and at a fixed price. The purchaser, say at New Orleans, executes the order and delivers the cotton on board a vessel for shipment. In calculating the amount of the draft or commercial bill of exchange drawn against the cotton he takes into the account the first cost of the staple, the insurance, the freight to Liverpool, all of which are variable, and, in addition to these items, the charges at the ports of New Orleans and at Liverpool, the loss incurred by the difference between the gross and the net weight of the bale—the weight at New Orleans including the covering, while that at Liver-

pool being the contents of the bale—commissions, interest and other minor items. The total of these sums represents the cost of the cotton delivered at Liverpool, and the bill of exchange is drawn upon the consignee for as much English money in pounds, shillings and pence as will cover the cost of the consignment, less a certain percentage which is, in some cases, deducted to provide for reclamation for short weight, inferior grade, damage or other causes. The bill of exchange, which is drawn in duplicate, is usually promptly sold either directly to a banker in this city or to some representative in New Orleans of such banker, and with this negotiation of the bill the interest of the shipper in the transaction ends. The banker who purchases the bill forwards it to his correspondent at Liverpool for presentation for acceptance. Payment of the bills at maturity is made with the proceeds of the cotton. The bill may, under some conditions, be discounted at the Bank of England rate by the acceptor, or it may be held by the correspondent until it matures in due course. In either case the proceeds of the bill are held as a credit to await the disposition of the purchaser of the draft. When the commercial bill is paid its function ceases.

Bankers in the cotton or other agricultural sections of the country who are familiar with the standing and responsibility of cotton factors or of exporters of other produce, or who exercise the same care in investigating such standing as they do that of makers of commercial paper, would incur little or no risk in purchasing commercial bills drawn against exportable commodities. The profit resulting from such purchase, especially during

active exporting seasons, would probably be satisfactory for commercial bills drawn upon bankers, almost invariably sell at a price which will afford a good return to the purchaser of the bill, and commercial drafts so bought could be promptly sold through the bank's correspondents at the principal centres.

One way by which a local banker can secure a profit through the indirect negotiation of a foreign bill of exchange, originating in a transaction in cotton or other exportable commodities, is by acting as agent or representative of his correspondent in Chicago or other Western city or in New York. The shipper of the staple naturally desires to sell his foreign commercial bill at as great an advantage as possible, and this can best be done in the large cities. He may be so circumstanced that it is necessary for him to hypothecate his bill for the procurement of a domestic draft upon Chicago or New York. In this case the local bank makes the domestic draft upon its correspondent, accepting the foreign bill of exchange as collateral, and forwards this collateral to its correspondent by whom the foreign exchange is sold to a foreign banker, and the proceeds are used for the payment of the domestic draft when it shall be presented. In such a case the local bank makes a profit upon the domestic bill of exchange, and possibly a commission upon the foreign bill.

The banks in the zone of which the agricultural section is the centre, may be called upon, in some cases, to supply to a buyer of an exportable staple, the funds with which to make his purchase. The loan so effected would have to be made upon the

credit or the standing of the borrower, but when the latter had forwarded his staple to the shipping point and had procured bills of lading and made the foreign draft to cover his shipment, such draft could be pledged as collateral for the loan and the bank could reimburse itself for the advance by immediately negotiating the sale of the draft with its correspondent.

Some of the most successful of the foreign exchange brokerage concerns in New York first established their business in southern and western agricultural sections, where they bought bills of exchange drawn against exportable products, quickly turning them over by re-sale to banking houses in large western cities or in New York, and in this way they gradually acquired an intimate knowledge of the business and at the same time secured clients among shippers whose bills they now exclusively handle. It would seem to be possible for local banks almost everywhere in the interior likewise to build up an exchange connection, materially adding to the profits of their business.

In the illustration above given the shipment is made to and the draft is drawn upon Liverpool. The process would be the same were the transaction with any other foreign country than England, with the exception that the commercial bill would be drawn for the money of that country—for francs in France, marks in Germany, roubles in Russia, the yen in Japan, etc.

CHAPTER IV.

COMMERCIAL EXCHANGE DRAFTS AGAINST COMMODITIES SHIPPED ON FOREIGN ORDER—AN EXPORT OF FLOUR TAKEN FOR ILLUSTRATION—DOCUMENTS ACCOMPANYING THE DRAFT EXPLAINED—HOW THE PROFIT IS REALIZED.

In a paper prepared by John M. Grant, which was read before the American Institute of Bank Clerks at Chicago in November, 1891, a detailed statement was made of the process of negotiating a commercial bill of exchange drawn upon commodities, the purchase of which was ordered from abroad and executed by a manufacturer in this country. The case selected for illustration is that of a dealer in flour in Germany, which dealer has placed an order with the agent of a large exporter of flour in Minnesota for a certain number of sacks of so many pounds each. The question of payment naturally comes up, and the dealer in Germany is informed that it will be necessary for him to instruct his bank to open a commercial credit for the required amount with its London correspondent in favor of the Minnesota Company. The dealer agrees and at once applies to his bank for the credit, giving instructions as to the shipment, how the drafts are to be drawn, what disposition is to be made of the documents, and stating the length of time the draft is to

remain in force. If the dealer is in good standing the bank will take his guarantee that the drafts drawn under the credit will meet due honor at maturity, and will make such other terms and conditions as are customary and compatible with safety. The original and duplicate of the credit are handed to the applicant, who keeps the duplicate and forwards the original to the shippers; the triplicate is forwarded by the German bank to its correspondents in London, on whom the drafts are to be drawn.

Meanwhile the flour agent notifies his firm in Minnesota that this particular dealer has given him an order for a certain number of sacks of a certain brand of flour, and that a credit has been opened in London that will cover the cost of the goods as well as the freight charges from Minnesota to their destination in Germany. Soon the goods are ready to be shipped, and a through bill of lading in duplicate is procured from the forwarding agent as a receipt for the shipment. In addition to the bill of lading issued to the shippers another is issued, called a "Custom House Copy," for the use of the custom house officers in this country.

The shippers now present the bill of lading to the insurance company with whom they hold an open policy for marine insurance, and receive a certificate in duplicate to the effect that so many sacks of flour bearing certain marks and covered by a bill of lading issued by a certain forwarding agent, have been insured against loss for a certain amount, usually a little above the amount of the draft. An invoice is then made out in duplicate, the original of which is forwarded to the consignee of the goods,

and the duplicate is attached to the draft, together with the bill of lading, insurance certificate and letter of hypothecation. The draft is drawn in duplicate at thirty, sixty or ninety days' sight, according to the terms of the credit, is payable to the order of "ourselves" (meaning the drawers or shippers), and is drawn on the London banker with whom the credit has been opened.

The documents covering the shipment are now complete in every detail, and the shippers proceed to realize on their draft. In other words, instead of waiting for the time limit to expire they sell their draft to a buyer of foreign exchange at the current rate of the day for that class of paper. By endorsing the draft, insurance certificate and bill of lading (which of course they are required to do in order to sell the draft) the shippers virtually renounce all claim to the merchandise, and the banker buying the draft has thus an additional security in the goods over and above that which he already possessed in the signature of the drawers, who, in this case, we will presume, are responsible and of good financial standing.

It must not be supposed, however, that in every case a draft is made more desirable or that its value is increased by attaching to it documents issued against a shipment of merchandise, for in some cases the drawers are of such good standing financially and morally that the documents cannot add to the market value of their bill of exchange. On the other hand, however, conservative bankers will hesitate before buying the exchange of some shippers even with the documents attached; but, as a rule, if the record of the drawer is clear in every

respect and his credit fairly good the documents will be considered sufficient security.

We are assuming that no difficulty is experienced in the case we are now considering, and that the draft has been bought and paid for in United States money. We will assume still further that it has been sold to a bank in a small town in Minnesota, which, having no direct correspondent in London, does its foreign exchange business through a bank in Chicago. The country banker will then endorse the draft in blank or payable to his Chicago correspondent, and forward it with the documents attached to be credited to his account at the current rate or at a rate previously agreed upon. It will be seen that the country banker has now become the endorser and that the purchasing bank can hold him for final payment if for any reason the draft has been refused acceptance or payment by the drawee.

The property covered by the draft has now become for the time being the property of the Chicago banker, and every detail of the draft itself as well as of the shipment, insurance, etc., is entered on his books for future reference. Both the first and second of exchange are endorsed to the order of his agents in London; the original set of documents is attached to the first of exchange and sent forward for acceptance and collection in the ordinary course of mail; the duplicate documents with the second of exchange go forward with the next steamer.

In due time the originals arrive in London and are presented to the drawee, who, it will be remembered, is also a banker. If upon examining the draft and documents he finds that the particulars tally with the terms of the credit opened in favor of

the drawers for account of the flour dealer in Germany, he will have no hesitation in accepting the draft in exchange for the accompanying documents. It will be readily seen that to deliver the documents before the draft is paid would release the only security the shippers had, as the goods would be delivered by the carrier upon production of the bill of lading. On the other hand, the drawee being a banker and presumably of high financial standing, acceptance by him would be ample security for payment at maturity, and the London correspondents of the Chicago banker would consider themselves justified in delivering the documents in exchange for his acceptance.

It is customary, however, to accompany the draft with definite instructions as to whether the documents are to be held for payment or are to be delivered to the drawee against his acceptance, as for example:—D. A. Documents for acceptance. D. P. Documents for payment. D. D. Documents for delivery.

“Documents for delivery” means that the documents are to be delivered to the drawee before presentation of the draft for acceptance, to enable him to get possession of the goods in order to sell them for account of the drawer or simply to inspect them and ascertain if they are according to contract.

The drawee having accepted the draft in exchange for the documents has now become the acceptor, and is as liable for payment of the draft at maturity as if he had given his signature to a promissory note. In a way, the fact that the draft has been accepted by the drawee releases all the endorers, but, should the unexpected happen and the ac-

ceptor go into bankruptcy before the draft matures, the endorsers would be liable in case of non-payment. It is necessary, therefore, that the greatest caution be used in the delivery of the documents.

In accordance with the terms of the credit the acceptor must either forward the documents to the custom house brokers of the consignee of the goods, or remit them direct to the consignee's banker. In the former case the custom house brokers look after the shipment upon its arrival, and send it on to its destination after the proper entries have been made at the custom house.

The documentary draft has now become a "clean bill," and the correspondents of the Chicago banker discount it for the latter's credit. Its payment at maturity being practically assured, the discount at the current rate for the time the draft has to run is deducted from the amount, and the remainder is placed to the credit of the Chicago banker, thus establishing a credit in his favor against which he may draw on demand.

In the meantime the German banker is advised by his London correspondents that they have accepted a draft for a certain amount under the letter of credit opened in favor of the Minnesota Company. This information is at once communicated to the flour dealer, who, if his banker demands it, gives a trust receipt for the goods in exchange for the documents which were forwarded to his custom house brokers or to his bankers direct. When the draft falls due in London and is paid by the acceptor the amount is charged to the account of the German banker, and he in turn converts the sterling amount into marks at the current rate of exchange for the

! day, and collects the proceeds from the dealer in flour; with this the liability of the endorsers ceases and the transaction is complete.

Now the question of profit comes up. It will be observed that directly or indirectly the draft has been handled by seven different parties without taking into consideration the fact that it may have been bought and sold any number of times in London before it was finally paid up by the acceptors. Each one of these seven parties must have received a fair remuneration for his trouble, and it is evident in the first place that the shippers have made their profit on the sale of their goods.

The profit of the Minnesota banker is the difference between the amount he paid the shippers for their draft and the amount he received from the Chicago banker for same. The Chicago banker makes his profit in the difference between the price he has paid for the draft and the price at which he has sold his own draft against it, less the commission he has to pay his London correspondent for taking charge of the collection and for paying his draft; and this commission forms the profit that the London banker makes out of the transaction.

Now the acceptor of the draft must receive something to compensate him for his trouble and for the liability incurred, and this he receives from the German banker by charging the latter's account with a small commission in proportion to the length of time he has been under acceptance for the amount of the draft. The German banker derives his profit from a commission charged the flour dealer, and the flour dealer, in his turn, makes his profit in the sale of the goods to his customers.

Direct transactions between manufacturers and jobbers or between manufacturers and merchants of different countries, differ from the method employed where a banker's credit is opened to cover the transaction, in that the documents in the majority of cases are to be delivered to the drawee only upon payment of the draft, and in that the jobber, himself being the drawee, has to accept the draft and account for the proceeds at maturity to the London correspondent of the American banker. If he can use his funds to better advantage than by paying the draft on presentation and thereby obtaining a rebate on the amount, he will of course do so; but if the goods are perishable, as in the case of meat, butter, cheese, etc., or, if there is a good demand for them and the price has advanced since the order was placed, it will clearly be to his advantage to pay the draft at once and obtain possession of the documents and ultimately of the goods.

CHAPTER V.

PROFITS OF FOREIGN EXCHANGE BUSINESS—THE MARGIN NARROW IN CITIES BUT LARGER AT INTERIOR POINTS—SUGGESTIONS FOR THE EMPLOYMENT OF COUNTRY BALANCES—THE SOUTH AMERICAN FIELD OPEN FOR EXCHANGE OPERATIONS.

Though the profits of the foreign exchange business, when single transactions are considered, may appear ridiculously small, they amount to a very considerable sum in the aggregate at the large centres, and in an active business season transactions in as much as £500,000 per day are very often recorded. Until within a few years quotations for actual business in sterling exchange fluctuated ordinarily by quarters of a cent per pound, as for example \$4.85 $\frac{1}{4}$ to \$4.85 $\frac{1}{2}$. As competition grew more keen and the business expanded, closer quotations were made, and now decimals, instead of fractions, are employed to express prices, such as \$4.85.35 or \$4.8540, so that whereas formerly a minimum profit of 25-100 of a cent per pound might be made, the profit is sometimes as small as 5-100 of a cent per pound. Of course, it would be only in cases where transactions were large that a comparatively insignificant profit such as the above would be considered and smaller transactions would not be made on

so close a margin. But on an average sale of £500 a net profit of 25 cents would not be refused, and on a business of £500,000 per day, which is not infrequent, with leading foreign exchange houses in New York, the profits would be quite satisfactory, amounting to \$250.

In this connection it may be stated that within the past three years a business in foreign exchange has been built up by one of the large banks of New York, from comparatively small beginnings, through economical management and the acceptance of profits as little as the lowest above referred to, until now the foreign exchange department of this bank is one of the most important at this centre. Its revenues are so large in the aggregate as to defray the entire cost of the department, including a high rental for the offices, and add a handsome quarterly contribution to the net profits of the bank. This is an illustration of the possibilities of the foreign exchange business when intelligently conducted in an active centre such as New York. Other New York banks which have established foreign exchange departments within a few years have had a similar experience, enjoying a steadily increasing business and necessitating the enlargement of their facilities and of their list of correspondents.

It may be observed that it is only at the great financial centres of the country, where the competition is most active, that the profits of single transactions in exchange are so small. In the country outside the centres a profit of at least half a cent per pound sterling can be secured, and where francs, marks or other continental exchange are more or less in demand, even a larger profit is obtainable.

By combining with foreign exchange operations in inland bills of exchange and by making advances to shippers of exportable products, and through various other ways which will suggest themselves to progressive bankers, an exchange business can be built up by banks in the agricultural regions and in those sections of the country which are being settled by European immigrants, which business in time, and with care, can be made highly profitable.

One important reason why commercial bills of exchange which originate in the agricultural regions are not more generally sold at neighboring centres, but are forwarded to large western cities and to New York for sale is that the drawers of these bills can obtain a better price for them at Chicago and at this city than they can elsewhere. Another reason is that the capital of inland banks is as a rule not large enough successfully to conduct this business in addition to ordinary transactions; and still another reason is that very many of the country bankers are unfamiliar with modern methods of handling exchange operations.

At certain seasons of the year, when the crops are moving, money is drawn to the agricultural regions from the great centres, and when this crop movement subsides the money is returned to such centres. The movement of money is attended with much expense to the banks, and sometimes the want of it during periods of unusual activity results in considerable inconvenience. When country bank balances cannot be employed by reason of dull business seasons the money is sent to the bank's correspondent in Chicago or New York, and there comparatively insignificant rates of interest are paid,

rarely exceeding $2\frac{1}{2}$ per cent. per annum, and in some cases much less. If the banks in those sections would make arrangements to supply the needs of exporters of the products through the negotiation of the foreign bills of exchange resulting from such exports, they would not only derive pecuniary advantage therefrom, but they would have active employment for their money during the greater part of the year, in assisting in the movement for gathering and in the export distribution of the crops, instead of sending it to the great centres for temporary use. Moreover, by endeavoring to build up a foreign exchange business they might be encouraged to increase their capital and to augment their circulation and other facilities, and ere long they would doubtless discover that they were growing less dependent upon the banks at the large centres, and at the same time that their sections were increasing in financial importance. Through the more general employment of money there would be less disturbance of equilibrium, which would result in more stable rates for money—an advantage to all interests.

The coincidence of the assembling of the New York State Bankers' Association in annual session during the Pan-American Exposition at Buffalo in 1901, gave the bankers of the state an opportunity to combine business with pleasure, and some of the more progressive of the bankers may have seen opportunities for the organization of exchange departments with a view to the transaction of an exchange business with South American states. Such transactions are now conducted through agencies in New York of British banks, and while a direct

exchange is thus effected, the profits of the transactions are largely enjoyed by foreign institutions. It may not be possible for American banks successfully to compete at once with these long-established branches of British concerns, but representatives of South American countries who were in attendance upon the Exposition doubtless would be able, if requested, to suggest to American bankers a way by which at least a beginning might be made in this business, which would ere long have satisfactory results. This new branch of banking need not necessarily be confined to banks in New York; it would seem to be open to institutions located in large manufacturing centres whence machinery is shipped to South America. Now these consignments are settled for through exchange drawn on London. If American banking houses could be induced to open exchange departments for South American trade the drawing of exchange in dollars would doubtless be most satisfactory. While the organization of a central bank for this purpose may be delayed, there would seem to be no reason why some of the already existing banking institutions should not make an effort to establish financial links in the form of direct exchange operations between the United States and Central and South America. Our South American commerce is rapidly expanding. It will be given a very decided impetus by the Exposition, and with the friendly relations which will thus be cemented the opportunity would seem to be presented for the gathering by ourselves of the financial fruits of our commercial enterprise by direct exchange negotiations instead of through branches of foreign exchange houses.

CHAPTER VI.

ERRONEOUS FORECASTS OF EXCHANGE CONDITIONS—EFFECT UPON THE MARKET OF THE FAILURE OF THE CORN CROP IN 1901—DERANGEMENT RESULTING FROM OVERSOLD COMMERCIAL BILLS.

In conducting speculative operations in foreign exchange, operators sometimes miscalculate the effect upon the market of possible adverse conditions, or of the development of opposition on the part of some of the large banking houses which conditions and opposition may be of such a character as could not have been clearly foreseen when the speculative operations were undertaken. For example, in May, 1901, the indications seemed to point to such an abundant yield of wheat and to such a large crop of corn and, at the same time, to an important reduction in the output of breadstuffs in Europe, as to make it almost certain that there would be an unusually large export movement of our cereals, especially to Germany.

Acting upon this conviction, speculators in grain contracted for the delivery in July of considerable amounts of wheat for shipment abroad, and almost concurrently these speculators, or those dealers in exchange who were co-operating with them, sold correspondingly large amounts of commercial bills deliverable in July and in later months, which bills were drawn against the prospective movement of the grain to Europe. These were legitimate specu-

lative operations, not only in grain but in exchange, based upon what then seemed to be a certainty of greater or less profit. Such transactions continued to be almost uninterruptedly made during June and somewhat intermittently in July. In the more recent months there were also speculative operations in sixty and ninety-day sterling in anticipation of covering the sales of these bills at a profit in October and November, when it was reasonably expected that there would be an abundant supply of exchange resulting from the export movement of breadstuffs and of cotton.

Until the drouth in the corn-growing states became so severe as to threaten a very decided reduction in the yield of that cereal, there was nothing in the outlook to disturb the confidence of the sellers of grain or of exchange for future delivery in the success of their operations. Discounts at almost all the European centres grew easier, while at home the tendency was toward firm rates for money, thus favoring speculative transactions in exchange and increasing the prospects for profits.

Influenced by the return movement of securities from Europe, which followed the shock of the May panic, incident to the Northern Pacific corner, the foreign exchange market was firm, thus aiding in the absorption of the speculative bills at high prices. Indeed, rarely had there been such favorable conditions for speculation in exchange, of the character above indicated, as those which were developed in May and June. The drouth in the corn belt in July, however, accompanied as it was by a prolonged period of extreme heat, was a highly disturbing factor in the market for grain, causing an

important advance not only in the price of corn but in that for wheat, and it began to be feared that these high prices would seriously check at least the early movement of these cereals for export, and that consequently deliveries of such commodities which had been contracted for could not be made and hence that the resulting exchange could not be delivered. Some apprehension was also felt that if the crop of corn should prove to be so greatly reduced in volume as then appeared probable, the effect upon foreign exchange would be to prevent any material decline in the rates at least until cotton began freely to move. As the normal export of corn in recent years had been of the value of about \$83,000,000, it was seen that the shortage in the crop would make a corresponding reduction in exports, and hence there would be a serious decrease in the volume of exchange drafts. Moreover though the wheat crop promised to be greatly abundant, and of unprecedented yield in some of the states, there were fears that the advance in the price of this staple, which followed that of corn, would deter liberal exports of wheat and of flour, even though the European demand might be urgent, and that foreign consumers of wheat would seek to procure substitutes therefor, or would buy the grain in somewhat cheaper though more distant markets abroad. This threatened reduction in the exports of corn and of wheat and flour, which exports in the fiscal year 1900-1 amounted in value altogether to nearly \$250,000,000, became a seriously deranging factor in the exchange market, and especially so when the fact was considered that the early speculative operations in exchange were based, when

made, upon the prospects of a liberal movement of breadstuffs before that of cotton began.

In addition to the adverse influences upon speculative contracts in exchange above noted, some of the foreign bankers, who deal largely in such drafts, possibly with the view of discouraging such transactions, because they had become so important as somewhat to interfere with their own operations, sought to discriminate against commercial futures drawn in anticipation of prospective shipments of grain, especially to Germany, thus compelling the drawers of such bills to accept a lower price for them than seemed to be reasonable under the circumstances. These bankers also in various other ways, such as the absorption of bills for remittance and for other purposes, kept the market during July in such a comparatively tense condition as to cause speculative sellers of sixty-day exchange who had operated in May, to rebuy the bills for covering or for renewal, thus further deranging the early made plans of these speculators. In some cases also the firmness of the market for exchange, which, as will be observed, was to a great extent artificial, induced sellers of commercial bills in May for delivery in July to cover their contracts either at a smaller profit than was expected or at a loss.

We have thus outlined the conditions due to unpreventable and also to artificial causes, which were operating in 1891, for the purpose of illustrating the obstacles which sometimes naturally arise or are interposed to make comparatively unsuccessful those of the most simple forms of speculation in exchange such as are capable of being undertaken by country bankers.

CHAPTER VII.

THE STUDY OF THE SCIENCE OF EXCHANGE—
PAUCITY OF TEXT BOOKS—GENERAL USE OF
EXCHANGE TABLES—NORMAN'S SYSTEM OF
CALCULATIONS—HOW FIXED PARS OF EX-
CHANGE ARE COMPUTED IN HIS CAMBIST.

Doubtless many who have been interested in the science of exchange, have felt disappointment at finding, upon inquiry, how few valuable text books treating of this science were obtainable. The few publications which exist are mostly of such a character as to require more or less close study for their comprehension. While the theory of foreign exchange is quite clearly defined, the rules for practice are not always illustrated by formulas. Moreover, in seeking for explanations from Cambists of how or through what mathematical process certain results were obtained, the reply has often been unsatisfactory, either because of inability to impart instruction or because of indisposition to inform those who may possibly become business rivals.

It may seem somewhat strange that anyone who can be classed as a Cambist, or who is actively engaged in the conduct of more or less intricate exchange operations, should be unable accurately and clearly to explain the processes through which certain results are obtained. When the fact is con-

sidered, however, that exchange is almost invariably worked out by the aid of tables, it will be seen that this inability is not surprising. The tables are constructed for general use by expert mathematicians who are familiar with every essential detail, the calculations are for almost all amounts which may be called for in the course of daily business; they are for all ordinary time-costs and other charges, and for all practical purposes they will meet every requirement. Provided with these tables, the active dealer in exchange can readily conduct his business in all forms of bills and in all kinds of money, whether gold, silver or paper currency, and can easily determine the rates for drafts, whether direct or circuitous, upon any commercial centre of the world. In some cases foreign bankers who transact a large business have their calculations especially prepared for them, and thus they are not wholly dependent upon the above-noted tables. These bankers are, through chief reliance upon their own tables, often enabled to make more profitable operations than their competitors who are unprovided with such exact computations. Results obtained through even the most accurate of these tables may, however, be regarded as more mechanical than scientific solutions, and hence those who rely wholly upon them gradually become unable through lack of practice clearly to illustrate the details of exchange transactions. Bankers who propose simply to confine their operations to occasional dealings in exchange drafts will doubtless find that these tables of solutions which are prepared for general use are amply sufficient for their purposes.

Students, however, who desire to acquire a thorough knowledge of the science of foreign exchange and thus obtain a reputation as Cambists, would do well to procure the most reliable text books, and with their aid work out for themselves the various problems, and verify by actual computation the results given in the tables above referred to. This practice will be found useful when the student comes to the investigation of modernly-devised processes for simplifying exchange calculations upon what is claimed to be a scientific basis.

Among the most useful of the works on foreign exchange will be found "Norman's Universal Cambist," by John H. Norman, who is recognized as an expert in the science of and practice with money. The second edition of this work, published in London in 1897, is claimed on the title page to be "a ready reckoner of the world's foreign and colonial exchanges of seven monetary and currency intermediaries with the aid of less than 60,000 figures whereby 756 tables of exchange, consisting of from 13,800 to 200,000 figures each, can be dispensed with." Such a simplification of calculations of exchange, could it be universally adopted, as it was sought to be by the author, would doubtless prove a valuable aid to the scientific study of foreign exchange. It should be noted, however, that though Norman's system of working the exchanges of small or large sums by the weights of pure metal in the world's moneys of account is admitted by good authorities to be the only scientific one, it was tried and abandoned after eight days' experience in this city about sixteen years ago, because it did not commend itself to those most largely interested in

the matter. This fact would seem to prove that large dealers in exchange preferred to adhere to the old system of working with exchange tables, constructed upon an unscientific basis, instead of adopting a new system which would give more accurate results through less complicated methods of calculation.

We submit a few extracts from Norman, selecting those which are of general interest to the student, and which state the basis of the revised system of exchange calculations. Treating of fixed pars of exchange, Norman gives an illustration the fact that 113,001605 grains of pure gold are signified in the monetary terms of the British Isles as a sovereign, this being the mint issue weight of that coin; in France by 25 francs 22.15 centimes; in Germany by 20 marks 42.96 pfenninge, and in the United States by \$4.8665 cents. The above weight of gold in the sovereign being multiplied by 2.123863 pence per grain gives 240 pence, into which the sovereign is divided. In France the same weight being multiplied by 22.31964 centimes per grain gives 25 francs 22.15 centimes. In Germany the same weight multiplied by 18.07893 pfenninge per grain gives 42.96 pfenninge. In the United States the same weight multiplied by 4.306632 cents per grain gives \$4.86.65. The results of these calculations are termed the fixed pars of exchange between Great Britain, France, Germany and the United States. For finding the fixed pars of exchange between Great Britain and the countries mentioned the weight of pure gold in their chief moneys of account must be divided by the weight of the pure gold in the sovereign, and the result will be Pars with France, .039648 of

a sovereign, or 9.516 pence per franc; with Germany, .049948 of a sovereign, or 11.747 pence per mark, and with the United States, .205484 of a sovereign, or 49.314 pence per dollar. It will be observed that the various pars are calculated on the basis of the weight of the pure metal contained in the chief moneys of account, and this is claimed to be the true scientific basis. Similar rules are applied by Norman to the ascertainment of fixed pars of exchange between the gold and between the silver monetary systems of the world on the mint issue weight of pure silver in the silver standard systems. The mode of ascertaining absolute pars of exchange, or the equivalent value of gold to silver or silver to gold upon the gold price of silver in gold standard countries, and the silver price of gold in silver standard countries, is made equally simple by the use of an intermediary in the form of a variable ratio.

The Universal Cambist, from which we have quoted, contains tables of fixed gold equivalents to gold in seventeen, and of fixed silver equivalents to silver and of silver equivalents to gold in twelve countries, thus covering nearly the whole of the commercial world and facilitating the working of exchange calculations.

Owing to the partiality for the present method of computation and working manifested by the great majority of drawers of foreign exchange it seems unlikely that Norman's system—which is based upon constants or fixed pars for exchange and the use of premiums or discounts upon these constants—will soon be generally adopted. Bankers who have become familiar, through practice and

study, with the existing methods of computation, will not readily consent to the substitution therefor of a system which, though it may be scientific, involves the abandonment of tables and rules which have grown to be almost universally employed. Norman's tables will, however, probably be found exceedingly useful in cases where exact computations of weights and fineness of metal may be required for the adjustment of international balances with gold. The system advocated by Norman will also be useful for the student of exchange because of its scientific character, and also because of the knowledge which will be imparted by it regarding the precise basis of exchange computations. Where text books treating of the science of exchange are so few, it would seem unwise for the student to reject any of these books upon the plea that they are unlikely to be of material assistance to him in the conduct of his business though they convey valuable scientific information. Indeed, a student of finance might with equal propriety decline to study Bagsehot, J. Stuart Mill, Herbert Spencer or other eminent authors of works upon financial or economic subjects.

CHAPTER VIII.

TATE'S MANUAL OF FOREIGN EXCHANGES—MATHEMATICAL COMPUTATIONS FACILITATED BY THE ESTABLISHMENT OF THE SINGLE GOLD STANDARD—THE COINAGE OF GREAT BRITAIN.

Among the most useful of the works treating of the science of exchange is "Tate's Modern Cambist," the sixteenth edition of which was published in 1874. It is, as is set forth in the title page, a "manual of foreign exchanges in the different operations of exchange and bullion according to the practice of all trading nations; with the moneys and other mediums of exchange of all nations calculated in sterling; also tables of foreign weights and measures, with their equivalents in English and French." The work, originally written by William Tate, was issued in the year above named by G. L. M. Strauss, who re-wrote and greatly enlarged it. The publisher is Effingham Wilson, Royal Exchange, London. The character of the work can perhaps best be illustrated by the following extracts from the first chapter:

"A rate of exchange is the value or price of the money of one country reckoned in that of another country. There are accordingly two terms in a rate of exchange, of which one is fixed, the other fluctuating. Thus in the exchange between London and Paris the fixed term is the pound sterling, the fluc-

tuating term, the value or price, given in francs and centimes, in exchange for the pound sterling. In the exchange between London and Lisbon, on the other hand, the milreis is the fixed term, whilst the value, given in pence sterling, forms the fluctuating term.

“When the fixed term is expressed in the money of the country drawing the bill of exchange, the drawing place is said to receive the fluctuating or variable price; whilst in the reverse case, where the fluctuating or variable term is expressed in the money of the drawing place the latter is said to give the fluctuating or variable price. Thus London receives from Paris—francs—centimes for one pound sterling and London gives Lisbon—pence for one milreis. In the quotations of rates of exchange the fixed terms are often omitted, the variable terms alone being called rates of exchange. The exact equivalent value of the moneys or currencies of different countries are called *Pars of Exchange* between these countries.

“If all coins were of the exact weight and fineness laid down in the mintage regulations of the different countries, and if there were no such thing as loss from wear and tear, one of the chief conditions indispensable for the correct deduction of *Pars of Exchange* would be supplied. As this condition is very rarely found to be in actual existence, however, we are compelled to base our calculations of the *Pars of Exchange* between different countries upon the assumption or supposition that the several currencies are really of the exact weight and fineness fixed by their respective mints. This one difficulty thus got over, another still more serious ob-

stacle to mathematical correctness in the calculation of Par of Exchange presents itself, to wit, the different standards of value obtaining in the several countries. Some countries take gold, others silver, for their standard of value. Of late years there has been a tendency exhibited on the part of some of the most important states of Europe and America to gravitate toward the single gold valuation, or at least to base their standard of value upon both silver and gold, which certainly tends to facilitate matters.

“Here in England the single gold valuation has prevailed ever since 1816. At that time we stood almost alone in adopting gold for our standard of value. Since then many other countries have imitated our example, among others the new German Empire, quite recently. The United States and France, although still in a measure retaining the double standard of both gold and silver, have taken very serious steps toward the adoption of the single gold valuation. The silver standard, however, continues to retain its exclusive rule in Austria, the Netherlands, the Scandinavian countries, the Russian Empire, the East Indies, China and Japan, and in Mexico and Central America and some other American states. In all these countries gold is simply an article of commerce, and gold coin merely commercial money bearing a variable agio or premium. The valuation of such gold coin amounts, under such circumstances, simply to a valuation in bullion from which no exact Par of Exchange with the legal silver currency of the country can properly be deduced.”

It will be observed from the above extract that

the statement concerning the standard prevailing in the United States, though correct in 1874, when Tate's Cambist was revised, is now erroneous. Since that year important changes in the standard have been made by other countries. Holland, in 1875, suspended the coinage of silver and created the gold florin as the money of account. In 1877 Finland replaced the double standard by that of gold. In 1892 Austro-Hungary replaced the silver standard by that of gold. In 1895 the gold standard was adopted by Chile; Russia, in that year, prepared to adopt gold as its standard. Peru, in 1900, provided for a gold money of account. In March of that year the United States, having in 1873 practically demonetized the silver dollar, and established the gold dollar as the unit of value, made provision for the permanent maintenance of gold as the standard.

The establishment of the single gold standard by the principal commercial nations of the world, since the revision of Tate's Cambist, has tended to facilitate mathematical correctness in the calculations of Pars of Exchange. Moreover, the passage of the act of the United States Congress in 1900, which provided for the maintenance of this standard, was immediately reflected in the broadening of the operations in foreign exchange between this country and the gold standard nations of Europe, and in eliminating the obstacles to precision in computations of exchange, the transactions in which now amount to many billions of dollars annually. The variableness in the fineness of the gold coins of the various countries has been remedied in exchange tables, and the provision for legal tolerance to cover

loss of weight through abrasion practically makes uniform deductions of actual *Pars of Exchange*.

The above extracts from Tate show that it was his aim, as well as that of the reviser of his *Cambist*, to submit a work which should be of practical value to students of the science of foreign exchange. As an aid to computations in exchange Tate gives tables of weights; also the fineness of the various moneys of account. The *Cambist* likewise contains tables of linear measures and of liquid and dry measures for use in the counting room. Formulas for conversions of different moneys of account are clearly presented, these being based upon the mint value of the coins. It may be noted that Tate, unlike Norman, did not seek to teach a scientific method of working exchange, the latter selecting the pure gold in the coin as the basis for computation. Tate accepted the mint valuation which had been the basis throughout almost the entire period since early in the century, when Great Britain adopted gold as the standard of value. Hence Tate will probably be found more interesting to the student as well as more generally useful than Norman.

We give as an illustration of the effort to correct erroneous impressions an extract from a note by the reviser of Tate concerning the British coinage of gold. He says: "A great mistake has frequently been committed, especially of late, in supposing that because gold is coined under the superintendence of public officers, and that the Crown, with the sanction of Parliament, prescribes the standard and current values, the gold coins are, therefore, issued by the Government. This supposition is altogether contrary to the fact. The Government coins no gold

for itself; but like any other private individual it procures its supplies, when wanted, from the Bank of England, which alone, for many years past, has been the sole importer of gold into the mint. It is consequently absurd to suppose that any claim can properly be made upon the Government (or indeed upon the Bank) to reimburse whatever loss arises from the wear or ill-usage of this coin more than there could be made upon any gratuitous fabricator of articles made of any other material, to have the things wrought from it repaired or renovated after they had undergone long use and possibly unfair treatment.

“The nation chooses to have gold for its standard of value. The Bank purchases gold with its notes. The Government works it into coin, free of expense, and the Bank issues this coin to the public in re-exchange for these notes at a trifling advance of rate, as a partial compensation for the gratuitous workmanship; an advance so trifling, however, as to be barely sufficient to defray the expenses incurred.”

CHAPTER IX.

INTERNATIONAL GOLD CERTIFICATES—A DEVICE FOR SUBSTITUTING FOR GOLD, DRAFTS WHICH COULD BE AVAILED OF BY TOURISTS—FEASIBILITY OF THE PLAN.

A little more than ten years ago I. W. Sylvester, an old and valued employe of the Government in the capacity of assayer in the New York assay office, conceived the idea of what may be termed an International gold certificate, based upon gold deposited in some central institution, such as the Bank of England, under conditions, imposed by International law, which would protect the deposit in the event of war. Mr. Sylvester had, from the character of his employment, observed the almost useless waste caused by the movement, to and fro, between this country and European financial centres, of gold in the form of bars and coin, and he suggested the adoption of a certificate calling for a certain number of grains of standard gold, representing the equivalent of this gold in dollars, francs, marks and sterling money. The form of the certificate which Mr. Sylvester prepared for the purpose of illustrating his system was as follows:

"This certifies that on this day there has been deposited at this office one hundred and twenty-nine (129) grains of standard gold. An equal amount of standard gold will be delivered to the bearer of this

certificate on its presentation at any of our sub-Treasury offices within these United States.

“The bearer of this certificate may also receive in exchange for it 20 shillings and 6 pence (British gold money) at the offices of our financial agents, located within the Kingdom of Great Britain; or 25 francs and 90 centimes (French gold money) at the offices of our financial agents located in either France, Switzerland, Belgium or Italy; or 21 marks (German gold money) at the offices of our financial agents located within the German Empire, as long as these British, French and German monies remain of their present weight and fineness.

(Signed)

“Secretary.”

It was proposed that the certificates, which it may be noted represented the value of \$5, or its equivalent, should be issued for units of the various monies named and for divisional parts and for multiplies thereof, so that any desired sum might be paid with or exchanged for them in any of the principal European countries. The certificates could be used by travelers independently of their letters of credit; they could be substituted for coins of the various countries, and even in large transactions the certificates would be as available as the money they represented. As a medium for the adjustment of international balances, certificates of larger denomination would be almost invaluable, making unnecessary the transportation of coin or bullion, and saving the large sums which are now almost irreparably lost through abrasion caused by transportation.

The plan of Mr. Sylvester did not get beyond the formative stage, though bankers and others to

whom it was submitted admitted its feasibility. The most important requisite would, of course, be the extension of facilities for the redemption of the certificates at the European centres; this, however, it was thought, could be arranged with the concurrence of the respective Governments provided that of the United States took the initiative. Among those who commended the plan were closely observing tourists, who, suffering from the inconveniences attending the almost constant exchanges of money in their progress through European states, felt the need of some such representatives of these monies as would obviate the necessity of carrying or of exchanging coins. While English, French and German bank notes circulated freely and at par within their respective countries, they were often accepted only at a discount when offered elsewhere than in the country of their origin. With the proposed International certificate, however, which represented a fixed weight of standard gold, there could be little objection to the acceptance of these certificates anywhere in the chief European countries. Even this objection could, it was suggested, be easily removed by a provision which should make the representative of the certificate a certain number of grains of pure instead of standard gold—for example, one hundred and sixteen and one-tenth grains of pure gold, 1,000 fine, instead of one hundred and twenty-nine grains of standard gold 900 fine. This would represent the same number of five dollars or their equivalents in British, French and German money. Should certificates of larger denomination be needed, multiples of the weight in grains could be provided.

Such a system of certificates could, it seems quite conceivable, easily become the medium for the adjustment of all international balances between gold standard countries, in lieu either of exchange drafts or gold, thus providing the one universal currency intermediary upon a scientific basis, advocated by Norman and other eminent Cambists. It is noteworthy that while Mr. Sylvester was formulating his plan the executive officer of one of the New York banks, who had made a study of the substitution of silver bullion certificates for the metal, readily negotiated a foreign loan with a prominent bullion dealer in London, giving as collateral certificates representing a precise weight of pure silver. The success of this transaction indicated the entire feasibility of making use of representatives of the metal in lieu of the metal itself. This negotiation seemed to suggest the employment of certificates for silver bullion as an intermediary for the adjustment of balances between gold standard countries and those in the Orient.

CHAPTER X.

THE ORIGIN AND HISTORY OF THE TROY POUND—
GREAT BRITAIN'S STANDARD OF WEIGHT FOR
THREE AND THREE-QUARTER CENTURIES—ITS
EXISTENCE FOR TWO HUNDRED AND SIXTY
YEARS WITHOUT OFFICIAL RECOGNITION—A
COPY OF THE STANDARD IN USE IN OUR MINTS.

The value or price of the money of account of commercial countries is determined by the weight and fineness of the metal contained therein, which weight and fineness are established by the mint laws of the country issuing the money. It is essential, therefore, that the standard of weight by which the various moneys of account are established shall be unvarying and have the highest legal sanction. Otherwise there could be no stability of values and no such thing as accurate deductions of *Pars of Exchange*.

It is noteworthy that the Troy pound of 5,760 grains has been the standard of weight used in the mintage of the coins of Great Britain since 1526, or for three and three-quarter centuries. It will doubtless be interesting to trace the origin of this measure of weight and to note the changes in it which were made from time to time from the earliest period of its existence until its final adoption as the standard in the year above named. During the in-

terval coinage and other operations based upon the unofficial pound must have been more or less uncertain, resulting in derangements of values and inducing the comparatively frequent resort to efforts to rectify the measure of weight.

Dowling's history of the Metric System, published in London in 1872, says that the origin of the early standards of weight and measure in England is extremely uncertain. They were probably introduced from the continent, and a portion of the ancient measures and weights of France, now disused in that country, are still retained in England. The French pound sterling of Charlemagne was twelve ounces, equal to 565.653 Troy grains. He introduced into France a system of weights and measures which were based upon standards received about 807. Hence it is presumed that the pound of Charlemagne had its origin in that year, and that the standards which eventually passed over into England from France became, after modification, the standards of Great Britain.

Kelly's Cambist, published in London in 1821, gives quite an interesting sketch of the origin of the English pound, which may have been a modification of the pound of Charlemagne. Kelly says that in 1266 it was enacted that an English penny, called a sterling, round and without clipping, and therefore a perfect coin, should weigh "thirty-two grains of wheat taken from the middle of the ear," and that twenty of these pennies should make an ounce and twelve of these ounces should make a pound. It was further enacted that "eight of these pounds shall make a gallon of wine, and that eight gallons of wine a London bushel, which is the eighth part

of a quarter." Thus provision was made in a single enactment for a standard of weight and also standards for liquid and dry measures.

It will be observed that in the above enactment the grains in the measures of weight, both Troy and avoirdupois, were originally grains of wheat, these subsequently being changed to metallic grains, and this designation of the smallest measure of weight is retained to this day. A few years later the Troy pound was made the English standard of weight for precious metals, and in philosophical experiments, and instead of thirty-two grains, as originally, the number was changed to twenty-four, these constituting the pennyweight—or the weight of a penny—as above noted. Twenty pennyweights continued to make an ounce, and twelve ounces a Troy pound of 5,760 grains.

The proportions of the Troy pound, thus adjusted, were maintained for about two hundred and sixty years without the official recognition of this pound as the standard of weight. Meanwhile the Saxon pound of 5,400 grains, also called the Moneyer's pound, was used by goldsmiths and other dealers in precious metals. In 1526 Henry the Eighth directed that the Troy pound of 5,760 grains be substituted, and in 1588 Queen Elizabeth caused a copy of this pound to be deposited at the Exchequer and directed that it should be the standard of weight. It appears, therefore, that from 1266 to the above-named date, or for three hundred and twenty-two years, England had no official standard of weight. After the recognition of the Troy pound as the standard the copy was carefully preserved. There was, however, no attempt at verification of the

standard, or copy, until 1758, or one hundred and seventy years after its adoption. Then the different parts of the standard pound were tested by a commission appointed by the Government, who found that the true pound was one and a half grains heavier than the copy in the Exchequer. The necessary corrections were made and a perfect standard was prepared and delivered to the master of the mint, by whom it was preserved. Since then frequent tests have been made but no change has been found necessary, and the Troy weights used in the mint and for precious metals are made to conform to this official standard.

A copy of the standard Troy pound was procured from England in 1827 by the Minister of the United States to Great Britain for the use of the mint, and this copy is in the custody of the superintendent of the mint in Philadelphia. From this copy weights in strict conformity therewith, consisting of the pound and sub-divisions and multiples thereof, were made for the branch mints and assay offices throughout the United States, under the provisions of the coinage act of 1873. In pursuance of this coinage act the copy of the English pound was made the standard Troy pound of the mint of the United States. At the annual inspection of the mint by the commission appointed to test the weight and fineness of the gold and silver coins reserved for examination the identical standard Troy pound which was procured from England is likewise inspected, and the divisional and multiple parts thereof made from this copy and in use in the mints are compared therewith and certified to as correct. It may be noted that this standard copy is of brass; it

is kept in a strong box locked with two keys, one of which remains with the director of the mint at Washington, and the other is in the custody of the superintendent of the mint at Philadelphia. The smallest sub-divisions of the standard weight in use at the mints and assay offices are in hundredths of a grain; the largest weight is twenty-five pounds.

It will be observed from the above that whatever variation there may have been in the Troy pound previous to its correction in 1758, there has been no change in this standard since. The periodical inspections wherever the standard is in use make possible the discovery of any deterioration. Hence, almost absolute reliance can be placed upon the value of bullion or of coins as determined by the standard Troy weight, and also upon the deductions of the Pars of Exchange which are based upon these coins.

CHAPTER XI.

THE METRIC SYSTEM—EXPERIMENTATION FOR TWO AND A HALF CENTURIES BEFORE THE ATTAINMENT OF PERFECTION—THE GRAMME SUBSTITUTED FOR THE TROY GRAIN IN MINT ASSAYS.

It appears by the above sketch that until 1588 the chief commercial nation of the world was for three hundred and twenty-two years without any official standard of weight, and hence that there must have been more or less variableness in the value of the coins in circulation. There was likewise inaccuracy in the minted values of the coins of France, owing to the prevalence in that country of systems of weights which had their origin in standards introduced into France at the beginning of the ninth century, and which existed unchanged until the production of the Charlemagne pound. It would seem that inaccuracy of these standards of weights early attracted the attention of scientists in France, and led to efforts on their part to devise a system of measurements which should have as its basis a fixed and unerring standard.

Charles Hutton Dowling, an English civil engineer, in 1872 published a volume of tables of conversions of measures of length and weight of the metric system, and in introducing his work gave an

interesting sketch of the origin of that system. He notes the fact that the earliest attempt at the development of the idea of selecting a portion of the earth's dimensions as a basis for uniform weights and measures was conceived by Jean Fernel, first physician at the court of Henri II., who in 1528 indicated in a work he published the method of measuring for such basis an arc of the meridian. He died, however, before his experiments were completed. The coincidence of the date of those experiments with that of the official recognition by England in 1526 of the Troy pound as the mint weight of Great Britain would seem to indicate that Fernel's idea had been suggested by the adoption of the perfected standard of weights by England. Fernel also probably had in view the discovery of a base for the French standard which should be scientific and invariable, which attributes were not possessed by the English standard.

Seventy-four years later, or in 1602, Willebrord Snell, a geometrician of Leyden, completed the measurement of an arc of the meridian by a system of triangulation, but he did not live to carry his experiments further. An attempt to develop the idea of Fernel was made later in the seventeenth century by Jean Picard, professor of astronomy at the College of France, and by his associates, who were appointed on a commission by Louis XIV. They sought, however, to base a new system of weights and measures upon the length of the seconds pendulum of Paris. Further progress in experimentation was interrupted by the outbreak of war. In 1669 Calbert invited Cassini, the celebrated astronomer, of Italy, to continue the experi-

ments which had been begun by Picard. Cassini conducted his work until loss of sight compelled its abandonment, when his son Jacques succeeded in carrying the experiments to a successful termination. He took as the unit of linear measurement the sixty-thousandth part of a terrestrial degree, which gave a length equal to 1.85185 of a metre. A son of Jacques Cassini later brought the experiments to a more exact determination through improved instruments. In 1736, under orders from Louis XV., experiments were prosecuted by Lacondamine in Peru, and by Maupertius in Lapland to execute geodesic operations for determining the configuration of the earth. The length of the toise—six French feet, or about 6.39459 English feet—made use of by Lacondamine as the basis for his measurements, was declared in 1766 to be the only legal measure of length in France. Thus after two hundred and thirty-eight years of experimental research by the most celebrated scientists the standard of linear measurement was established in that country. Presumably this standard was then regarded as scientifically accurate. It had as a basis absolutely fixed data, determined through operations with the aid of the most improved scientific instruments, and the result was obtained through computations conducted with the utmost care. Compared with the English standard of linear measurement, which had for its unit the inch of “three barley-corns,” the French standard must have been regarded as perfect.

In 1791 the French Academy of Science recommended the adoption of the quadrant of a terrestrial meridian as the basis of a new system of

weights and measures. In pursuance of this recommendation measurements by Delambre and Mechain were taken between Dunkirk and Barcelona, and the length of the quadrant calculated. After the prosecution of further experiments, with a view to the verification of the calculations, a decree was issued in 1793 which contained a schedule of new weights and measures, with equivalents of the ancient system. This schedule was ordered to become operative July 1, 1794. On March 7, 1795, another decree was issued in which the present metric system was definitely organized. There was much opposition on the part of the French people to the substitution of the new for the old system, and consequently the government modified its decree in 1812 and permitted the use of a compromise, which was called the "System Usuel." Twenty-five years later, however, July 4, 1827, the metric system was made obligatory in France after January 1, 1840. Its use has since become quite general in Europe, it being employed in ten out of the fifteen gold, and in three out of the twelve silver monetary systems, and the employment of the metric system is permitted in Great Britain and in Russia, and it is legalized by enactment passed July 28, 1866, in the United States.

The International Standard metre is deposited at the International Bureau of Weights and Measures at Paris. After the adoption by the United States of the metric system standards were prepared by the Geodetic Bureau of the various weights and measures required by that system. There were also prepared tables of equivalents for use in computing and expressing in customary

weights and measures those of the metric system. Among the standards above noted were those for the smallest divisional parts, to the 20-1,000th of the gramme, for use in the mints and assay offices, and these are employed in the delicate processes of assaying the precious metals. The weight of fine gold bars is expressed in Troy ounces, and in decimals thereof, instead of in pennyweights and grains. To this extent, therefore, the Troy weight is used. In the assay of gold, however, which requires the utmost exactness in the determination of the weight of the samples selected for assay the gramme and the divisional parts thereof are employed exclusively.

It is noteworthy that to such perfection has the process of assay of gold been brought at the office in New York that absolutely pure metal, without even a trace of alloy or baser metal, is produced. Gold of this fineness, however, is manufactured only for the purposes of the office, and in order to serve as a standard for the determination of the fineness of other samples of gold. Usually the small bars which are manufactured for sale to jewelers and for employment in the arts contain a small proportion of baser metal. What are known as commercial bars, which are required for export, have a somewhat larger proportion of baser metal, otherwise there would be loss from abrasion in transportation. It may be noted, however, that the stamp of the United States Assay Office, certifying to the weight and fineness of these commercial bars, is customarily accepted at European assay offices without question.

The metric system of weights has made possible

the exact determination of the minted value of the moneys of account of the various commercial nations of the world. Though the Troy standard of weights is still generally employed in Great Britain and in the United States, the accuracy of these weights is susceptible of proof, should such test be necessary, by comparison with the more scientific metric weight. It would seem impossible, therefore, that any variation in the Troy standard, such as was discovered in 1758, when the pound was found to be one and a half grains too heavy, thus involving a loss to the Government of about six cents per pound, can remain undetected. The minted value of all the moneys of account must therefore be regarded as the basis for establishing absolute Pars of exchange.

CHAPTER XII.

THE DOMINATING INFLUENCE OF MONEY RATES UPON EXCHANGE—A NOTABLE ILLUSTRATION IN 1896—CREDITS ADVANTAGEOUSLY EMPLOYED IN EUROPE BECAUSE OF RELATIVELY HIGHER RATES THERE THAN IN NEW YORK—HOW THESE FOREIGN LOANS WERE EFFECTED THROUGH INVESTMENT BILLS—MAGNITUDE OF THE LOANS SO PLACED IN 1900—A REVERSAL OF MONETARY CONDITIONS IN 1901 CAUSED LARGE BORROWING OF FOREIGN CAPITAL.

In forecasting the probable course of foreign exchange with a view to the determination of the likelihood of success in operations extending over comparatively long periods the prospective relative conditions of the money markets at New York and at European financial centres often are highly important factors for consideration. Indeed, occasionally changes in monetary conditions are of such a character as almost entirely to counteract the influence upon foreign exchange of the international trade situation.

A notable illustration of the dominating influences of monetary conditions upon the exchange market was presented late in 1896. It is noteworthy that then was the first time in twelve years that foreign bankers had been enabled to take advantage of conditions of the money market to conduct opera-

tions in foreign exchange having for their object the advantageous employment of credits in the European markets. The favorable outlook for improved currency conditions resulting from the Presidential election of that year, had, however, an important influence contributing to the success of these negotiations.

The operations of the character referred to were of such importance that it will be of interest to recall the circumstances under which they were then, and have at intervals since, been conducted. Owing partly to political complications in Europe, discounts in London were comparatively high toward the end of 1896. The restoration of confidence in the stability of our currency which immediately followed the election of President McKinley had such a decided effect upon our money market as to cause rates for loans to fall to extremely low figures. The opportunity was thereby offered our foreign bankers to loan their balances and credits in London at more remunerative rates than could be obtained in New York. The transfer of balances was effected through quite simple operations in foreign exchange, international trade conditions favoring these transactions. Our merchandise exports for the calendar year 1896 were extremely large; indeed, the statistics for the twelve months showed \$1,005,837,241 of such exports, the greatest ever recorded, while the merchandise balance for the year was \$324,257,685. These results had, it may be noted, been foreshadowed early in the fall months by an abundant supply of commercial bills.

Immediately following the Presidential election our foreign bankers began to accumulate credits in

London by permitting the proceeds of the commercial drafts, which they had bought and were then purchasing, to remain with their correspondents, by whom the credits were loaned at high rates in the London market. The sixty or ninety day banker's bills which were drawn against these credits were not forwarded for presentation, but they were carried or borrowed upon in the New York market at the then low rates for money. Hence these bankers' drafts took the name of investment bills, they representing the investment of credits in London. The operation was profitable so long as rates for discounts ruled relatively higher at the British capital than here. The profits of the operation were further enhanced by the difference in the price of the long sterling bill and the price realized for the draft when it matured at the expiration of the sixty or ninety days for which it was originally drawn.

By the end of January, 1897, discounts in London grew easier. Owing to the absorption of commercial bills, through continued purchases, and the withholding of long sterling for the purposes of investment the exchange market grew firmer. There then, for these reasons, being little profit in the operations above noted, they partially ceased, though in many cases the maturing drafts were exchanged for long sterling with the object of extending the investment for a further period of sixty or ninety days. By the end of April, however, all these investment operations had been closed out, and it was then estimated that they had amounted, from the beginning, to upwards of \$60,000,000. At intervals subsequently, when the monetary conditions

were favorable, the opportunities for profit in such operations were embraced not only by foreign bankers, but by domestic banks whose attention was attracted thereto.

In 1900 these operations were of greater magnitude than ever before, and at one time the investments in long sterling were considerably in excess of \$100,000,000. Moreover, the accumulated credits in London resulting from such operations were so large that the greater part of the American purchases of international bonds, including British consols and Exchequer bills, and the German Imperial loan, were settled for with outstanding credits. We have here outlined the process of investments in sterling when discounts abroad were relatively higher than rates for money in New York.

A most striking example of the influence of monetary conditions adverse to this country was exhibited early in 1901. Notwithstanding the fact that for eight months of the calendar year exports of commodities against which commercial bills were chiefly drawn, were \$55,536,703 in excess of those for the same time in the previous year and also that even the merchandise movements representing all exports for this period were \$22,668,298 greater than those of 1900, rates for exchange during the seven months ending with August ruled at comparatively high rates. This was clearly the result of the dominating influence of adverse monetary conditions which began to be felt early in April, and which continued to be exerted notwithstanding the favorable international trade situation above noted. High rates for money here and low discounts abroad caused the borrowing of enor-

mous amounts of money in Europe through exchange loans, and there was likewise speculative selling of sixty to ninety day bills. These operations not only absorbed credits against commercial drafts, but they resulted in the creation of a short interest in exchange of great magnitude, amounting, as estimated by a prominent banker, to more than \$300,000,000, or equal to the value of the entire volume of exported commodities since April.

CHAPTER XIII.

THE INFLUENCE OF EXCHANGE UPON RATES FOR MONEY—HOW THE LONDON DISCOUNT MARKET IS SOUGHT TO BE CONTROLLED BY THE BANK OF ENGLAND—WITHDRAWALS OF GOLD RETARDED BY AN ADVANCE IN DISCOUNTS—SENSITIVENESS OF MONEY TO EXCHANGE CONDITIONS.

The dominating influence of rates for money upon those for exchange having been shown in the previous chapter, it may be of interest to note the influence which is often exerted upon rates for money, especially in London, by those for exchange in New York or in Paris or Berlin, which influence is quite marked whenever rates for exchange move toward a point threatening a drain of gold from London to New York or to the continent.

Theoretically, the Bank of England controls the discount market at London. This control is sought to be maintained through the official rate of discount at the Bank, which is advanced when the stock of bullion in the Bank is seriously threatened, by a fall in exchange, with reduction either through a drain of gold to the continent or to New York. Whenever conditions prevail which make it inadvisable to advance the Bank rate, a resort is had to the exaction of a higher price for gold, either bars or coin, and this course is usually effective in preventing a drain of gold from the Bank or from the

bullion market, and it also contributes to divert the demand for gold from London to Paris. Sometimes when the Bank is unable to maintain control of the discount market, by reason of the prevalence of abnormal monetary conditions, the Bank seeks to regain control through borrowings upon its securities, thus temporarily increasing the demand for discounts. Should this course not be effective, resort is had to an advance in the Bank rate. The various steps above outlined looking to the protection of the bullion reserve of the Bank are prompted by the adverse changes in the tone of the market for exchange upon London, either sterling or continental, which directly influence discount rates.

The effect of exchange conditions upon money rates is less observable in Paris than elsewhere as is shown by the fact that discount rates at the French capital are more stable. Changes in the official rate of the Bank of France are seldom made, and then only during financial or political derangements. The Bank of France instead of changing its discount rate protects its stock of gold by advancing the price of the metal when withdrawal is threatened. Exchange at Paris or at other continental centres on London has quite as decided an influence upon discounts at the British capital as has the exchange market in New York. The contiguity of the European centres facilitates almost constant investments in exchange on London and buying and selling of this exchange are responsive to prevailing monetary conditions at the various centres. Liberal sales of exchange on London, either at Paris or Berlin, which foreshadow a drain of gold from London to those centres, as promptly

affect money rates at the British capital as do a decline in rates for exchange at New York on London. On the contrary, purchases at Paris or Berlin of exchange on London forecast a movement of gold to the British capital as the result of the higher rates for such exchange and hence discounts at London grow easier. Moreover, when the drain of gold has been diverted from London to Paris the price of the metal at the British capital declines.

The sensitiveness of money to exchange conditions is more acute in Europe than it is in New York because there is almost a constant struggle among nations abroad to acquire the metal or to retain their stocks of gold either for financial or for political reasons. Negotiations of international loans of greater or less magnitude are almost always in progress and naturally there is a desire on the part of bankers at the chief centres to profit through these negotiations. Hence their influence is exerted to cause an accumulation of gold in their respective national repositories with a view to the cheapening of rates for money and the maintenance of easy monetary conditions. This object can often best be attained through the exchange market and the diversion by bankers of bills for discount from their own to neighboring centres. In this way the local discount market is relieved and the proceeds of the discounted bills are accumulated at contiguous foreign capitals to be drawn upon as occasion may require through the sale of exchange upon these centres. Thereby disturbance to the money market which is sought to be protected is avoided through this adroit manipulation of exchange.

Sometimes the more direct method of protecting

the money market through sales of securities is resorted to and indeed this course is frequently pursued in London when that centre is menaced by a demand for gold from New York. Liberal sales of American securities naturally create a demand for exchange with which to pay for the stocks, and rates for exchange rise beyond the point at which gold can be profitably drawn from the menaced centres.

We have here outlined the manner in which exchange conditions influence the money market and the measures which are resorted to for the purpose of counteracting these influences. There are occasions, however, when exchange conditions are so overwhelmingly dominant as to render nugatory all efforts to protect those markets for money which are menaced by the demand for gold. Then, contrary to the custom here, where gold is obtainable without delay or obstruction, the European banks seek in various ways to defer response to the demand and when the inquiry can no longer be evaded or postponed obstacles are interposed which make the procurement of the metal for export as difficult and as expensive as possible. This course is taken in order to minimize the effect upon the money market of the withdrawals of gold, the obstacles presented to the export movement operating temporarily to retard the shipment of the metal. Very rarely is the movement of gold hither from Europe free, in the sense that it is not obstructed, so tenaciously do foreign banks guard their supplies of the metal for the purpose of avoiding derangements of their money markets through this form of international exchange settlements,

CHAPTER XIV.

CONSIDERATION OF THE INTERNATIONAL TRADE SITUATION NECESSARY IN EXCHANGE OPERATIONS—NEUTRALIZING EFFECT UPON FAVORABLE TRADE CONDITIONS OF A RETURN MOVEMENT OF SECURITIES.

In endeavoring to forecast the course of the foreign exchange market with a view to operations therein, whether speculative or otherwise, it is essential carefully to consider international trade conditions and prospects as well as relative monetary conditions in this country and in Europe. Should merchandise exports promise to be large and gradually increasing in volume, while imports were likely to be small or, at least, not excessively great, there would seem to be good reason for expecting an augmentation of the merchandise balance in favor of this country, and, consequently, that rates for exchange would rule at low figures during the seasons when exports of commodities were largest.

A counteracting effect upon the course of exchange would, however, be exerted should there be a prevalence of such monetary conditions abroad as would cause discounts at the principal financial centres of Europe to rule at relatively lower rates than here; or should rates for money abroad be

relatively higher than those in New York. Under the influence of dearer money abroad, exchange would be more or less in request for the remittance of balances for employment in Europe, and at the same time exchange would be accumulated and the resulting credits loaned on the foreign markets. The general tendency of rates would, however, be downwards. On the other hand, relatively dearer money here than in Europe would cause the almost constant negotiation of exchange loans and the prompt drawing of current balances or credits resulting from the payment of commercial bills, representing exports of commodities, which operations would result in the maintenance of comparatively high rates for exchange, especially if the exchange loans were of magnitude sufficient to absorb the current offerings of such commercial bills.

It will be observed, therefore, that relative monetary conditions must be considered in forecasting the course of the exchange market as well as the international trade situation. These monetary conditions are usually capable of being more or less accurately foreseen through a study of the existing or prospective financial and commercial situation and of industrial development. Sometimes, however, sudden and unexpected events lead to important derangements in the situation and a radical reversal of the course of the exchange market follows through a resort to measures for the relief of the financial tension. Another cause for derangement which cannot be foreseen is the abnormal international movement of securities. A normal movement is almost constantly in progress and, therefore, unless the transfer of securities suddenly in-

creases it attracts comparatively little attention. Whenever the volume of securities which are being transferred is greatly augmented the effect upon the exchange market is immediate, an outflow of such properties causing a decline, while an influx brings about an advance in rates for exchange.

There have in recent years been several occasions when the effects of favorable international trade conditions have been unexpectedly neutralized through radical changes in relative monetary conditions or through abnormal movements of securities or both these influences. A most striking illustration of the apparent complete neutralization of favorable trade conditions, through a return movement of securities was presented early in the spring of 1901. Nearly twelve months previously, or soon after the passage of the Gold Standard law, and influenced by that enactment, there was almost a simultaneous demand here and in Europe for American railroad securities for speculative and for investment purposes. Later, however, large amounts of the securities which had so recently been bought, and also those which had long been held abroad were sold chiefly to take advantage of the high prices ruling for them. This selling movement was continuous for the remainder of the year, and it was greatly influenced by deranged industrial conditions in Germany which seemed to threaten more or less financial disturbance, and, with a view to prepare for possible trouble of this character, the Germans were among the largest sellers of our securities.

During the first four months of 1901, Europeans took advantage of the boom in prices and still more

freely disposed of their holdings. The Northern Pacific crisis in May seemed to induce even more liberal selling of American securities, and it is believed that this return hither of European stock holdings not only cancelled the remainder of the unliquidated international trade balance, but left this country very largely indebted to Europe on this account. It will be observed, therefore, that what had been claimed to be an enormous favorable balance of trade which, superficially viewed, was supposed to be unmistakable evidence of the highest degree of prosperity, was, in the comparatively brief period of sixteen months, liquidated largely through the return movement of securities.

Almost concurrently with this noted reversal of the international trade situation there came a marked change in relative monetary conditions between this country and Europe. Instead of our bankers loaning their balances in the foreign markets, as had been done so freely in the previous year, these bankers borrowed largely from Europe through exchange loans, thus increasing the indebtedness which had resulted from the return of securities. The demand for foreign capital for use in our market was greatly due to the fact that the stocks and bonds which had been brought hither from Europe remained undigested, necessitating the negotiation of loans for the special purpose of carrying these securities until they could be marketed. Requirements for money for domestic uses were large and in excess of the supply, and, consequently, rates for money continued to rule relatively higher here than in Europe. The partial destruction of the corn crop by drouth, the lamentable

death of President McKinley and the withholding of cotton were among the influences directly or indirectly contributing to the derangement in the monetary and the exchange situation.

CHAPTER XV.

THE INTERNATIONAL BALANCE OF TRADE—ERRO-
NEOUS IMPRESSIONS CORRECTED—HOW FAVOR-
ABLE BALANCES ARE CURRENTLY LIQUIDATED
—NO ACCUMULATION OF FOREIGN INDEBTED-
NESS RESULTING FROM TRADE MOVEMENTS—
SECURITIES THE PRINCIPAL MEDIUM FOR AD-
JUSTMENT OF BALANCES.

The prevailing impression among those who have not given the subject careful study seems to be that what is known as the international balance of trade, or the excess of exports over imports of merchandise, specie and bullion, is a sum which accumulates from time to time, and is suffered to remain almost wholly unliquidated until the period arrives when it shall become necessary or desirable for the creditor nation to collect this balance. Also that when the liquidation of such balance shall be required, the debtor nation must make settlement, either with securities or other things of value, which may be acceptable to the creditor nation, or gold must be forwarded in liquidation. Hence the remark is frequently made by those who take a superficial view of the international trade balance, as disclosed by the statistics of our commercial transactions, that because our exports of merchandise, specie and bullion are or have been for a considerable period greatly in excess of the imports,

therefore there must be an enormous balance of indebtedness due this country by foreign countries, even admitting that this balance has been partially liquidated, or offset in various ways, such as through payments for freight, insurance, interest on securities, expenditures by Americans residing abroad and by tourists, which items, together, make up what is called the invisible or indeterminate balance against this country.

During the six calendar years ending with 1901, the excess of exports over imports of merchandise, specie and bullion, as reported by the bureau of statistics of the Treasury Department, amounted to the enormous sum of \$3,036,422,332. As the returns for each successive year were compiled and made public they were regarded as unmistakable evidences of almost unexampled prosperous conditions, and doubtless there were many who wondered how such a stupendous favorable balance of trade could be liquidated without monetary derangement in every financial centre of Europe. The explanation given in connection with these annual statistics of our commerce that, as an offset to this balance, there must be deducted an estimated amount of between \$150,000,000 and \$250,000,000, representing the invisible adverse balance, was generally lightly regarded because, even after deducting the maximum annual sum of \$250,000,000, there would remain each year an apparent unliquidated balance of from \$61,560,317 in 1896, in which year the excess of exports over imports was least, to \$412,303,259 in 1900, when this excess was greatest. Moreover, upon the assumption that the balance at the end of each year remained unliquidated

and that it was added to that of the ensuing year, the net indebtedness at the close of 1901 would, for the six years, amount to \$1,536,422,332, after deducting \$1,500,000,000, representing the invisible balance for these years.

The impression generally conveyed by these enormous sums was that the United States had actually become the paramount creditor nation of the commercial world, and that we possessed the power to draw from Europe indefinite amounts of gold whenever final liquidation of our credit balance should be demanded of foreign countries. The suggestion that such liquidation could be, and, indeed, might have been largely effected through the return of American securities held abroad, was received with expressions of doubt, for it seemed to be generally believed that Europe had sent hither, from time to time, such large amounts of our securities that comparatively few of them remained abroad, and that not enough could be gathered to make much of an impression upon the balance of her indebtedness. In support of the theory that Europe was dependent upon this country, by reason of our enormous credit balance, for financial assistance, the fact was pointed out that the principal European nations had, during the calendar year 1900, borrowed from the United States on international securities at least \$100,000,000, and that vast amounts had been loaned to foreign bankers, in the form of accumulated current credits, resulting from the collection of commercial drafts, thus largely increasing Europe's indebtedness to this country.

It is not surprising, therefore, that with the im-

pressions so generally prevailing, there was such skepticism manifested regarding the evidence which was presented during the fall of 1901, not only of the complete liquidation of our international balance, but of the existence of an enormous indebtedness of our bankers to those of Europe. When the fact is considered, however, that these impressions have an erroneous basis, the international trade situation, which seemed so inexplicable, may be clarified. As a matter of fact, liquidation of international balances is constantly in progress in one form or another, and at no time can it be truthfully said that any important amounts are due to this country or to our bankers, except, perhaps, upon unmatured exchange drafts. There may be, at some periods, when money can be more gainfully employed abroad than here, a temporary accumulation at European centres of bankers' credits, but these are collectible at will, and they have nothing to do with international balances except so far as these credits result from the payment of commercial exchange drafts. There are also held in this country by individuals and corporations evidences of debt in the form of international securities which have been bought for investment. These also have nothing to do with international trade balances.

The producer of exportable commodities, whether these be cotton, grain or other raw materials or manufactured articles, is paid for his goods with the proceeds of bills of exchange, either domestic or foreign, which the purchaser draws. When the goods are delivered to the transportation lines for movement out of the country the shipper is reim-

bursed for his outlay through the proceeds of the foreign bill of exchange, which he sells to the foreign banker. This banker is, in turn, reimbursed for his outlay through the payment of this bill at maturity, and each export transaction eventually terminates with the placing with the correspondent of the banker, or the drawee of the bill, at foreign centres, of the credit resulting from the collection of the indebtedness caused by the export hence of the goods. Against this credit the banker draws his own bills, which he sells to importers of goods from abroad, in this way reimbursing his credit, and thus the amount of the current imports are made to offset, to a certain extent, or as far as they will go, the amount of the current exports. Any resulting balance of credits undrawn for does not long remain unliquidated. Such credits may be used for the purchase of securities, which can be profitably bought abroad through arbitrage operations for sale in this country; they may be employed in loans, either floating or fixed, should money be more valuable here than in Europe; they may be drawn against for the purchase to the banker's advantage of anything of value which will yield a profit, whether securities or gold, which metal, it may be noted, is treated as merchandise whenever it leaves the country in which it originated, and the credits may be and, indeed, are drawn against to remit for the items of the invisible balance above enumerated.

Whatever may remain, after the current adjustments of the international balances and the employments of credits in the manner indicated, may be regarded as temporary additions to the capital

of the banker, to be employed by him as opportunity offers, and not in any sense the property of those of our exporters who have contributed to the creation of these credits, for, as has been stated, their claims have been transferred to the foreign bankers. It is true that a large favorable international balance of trade is evidence of prosperous conditions, for it enables our capitalists and investors to absorb increased amounts of the securities which are from time to time brought hither from Europe, and the stimulus of the higher prices obtained here tends to augment such movement.

CHAPTER XVI.

WHY GERMANS ARE EXPERIENCED CAMBISTS—
THE SYSTEM OF INSTRUCTION IN THE SCHOOLS
THOROUGH—SYSTEMATIC EDUCATIONAL METH-
ODS PURSUED—CAREFUL TRAINING IN COUNT-
ING HOUSES AND BANKS—HOW IMPERFECTIONS
IN THE EARLY EDUCATION OF AMERICANS CAN
BE REMEDIED.

It is worthy of note that the most successful operators in foreign exchange are Germans. They seem to have established themselves in the great commercial centre of London which, for centuries, has been the principal foreign exchange city of the world, they are found in every important trade locality, they closely follow the flags of all nations wherever these emblems may be planted, and there is scarcely an exchange house in this country which has not, either as manager or in some important position, a native of some one of the States of the German Empire. One chief reason for this predominance of Germans in this branch of the banking business is, as is claimed by bankers of that nationality, that they are thoroughly educated in their schools at home, and are systematically trained in the business houses where they obtain their early employment. Thus they acquire a practical knowledge of every business detail and they are enabled to obtain positions in banking estab-

lishments in which they make rapid advancement. When they become qualified they are either transferred to branches of the home institution or they migrate to localities which seem more promising and soon succeed in establishing themselves in profitable business.

The pupil in the German schools usually remains until his seventeenth year, and, in some cases, until he is nineteen or twenty. Between the ages of sixteen and seventeen he must be examined for one year's service in the army. He is required to pass in two languages besides his own, in geography, mathematics in its various branches, history and other school studies, in order to obtain his certificate, which will entitle him to secure the limitation of one year, instead of two or three years, in the army. Without such certificate it is almost impossible for the boy to be admitted to any business office, and banks further require that their clerks must graduate from the high school, which involves from four to five years' additional study. When the student enters the employment of a bank he is expected to be proficient in languages, in commercial and historical geography, in accounts in two currencies, and in calculating foreign currencies and every form of arbitrating. It will be observed that the German student is at his graduation from the high school and his entry upon a business or a banking career, thoroughly equipped, so far as concerns his education, for the work in which he is about to engage. His employer is expected to give him practical training in the business, and after a three years' apprenticeship the young man serves one year in the army, on the completion of which

service he travels, eventually engaging in business either as clerk or in other remunerative employment. Not until he is well qualified does he receive pay for his work, and the rapidity of his promotion will depend upon his attention to his duties.

The systematic course of education which obtains in Germany is in marked contrast with that which too generally prevails in this country. The American boy is practically forced or "crammed" during his progress through the intermediate grades, he is superficially taught from established text books and drilled in the rules and formulas contained therein without obtaining the knowledge which he should acquire in order to apply the theory to practice. The examinations preparatory to promotions to higher grades are chiefly reviews of the lessons which he has been taught from the books, and in the study of which he has had comparatively little aid from his teacher. If the pupil should fail, at his examination, to obtain the requisite "marks" to entitle him to promotion he is required to remain in the lower grade until the time fixed for further examination. Should the pupil finally succeed in graduating from the high school he is often in a condition of almost helplessness when he enters a business career, and without the aid of his immediate superiors or of those of his associates who have had experience he is enabled to make little progress, even if he should succeed in retaining his position. Thus the clerk is handicapped at the outset of his business career by imperfect education and only through perseverance and continued study can he hope to obtain advancement.

Doubtless bank clerks who have begun their

study of exchange with the hope of mastering its intricate problems have realized the fact that they were imperfectly equipped for their task through deficient education, and many may have become discouraged at the comparatively insurmountable difficulties which have been encountered. There would really seem to be no good reason for abandoning the study of foreign exchange because of these obstacles, for they can be overcome through persistent effort, well directed study and the application of rules which will be found in the text books in which the student has been drilled during his school course. The first essential for a systematic course of instruction is perfection in arithmetical problems, to be followed by the selection of examples from bills of exchange, which are almost constantly passing under the observation of junior clerks in banks. The working out of such examples according to the rules laid down in the school text books and the proving of the same will soon result in the establishment of accuracy in calculations and in the adoption of short methods of computations.

CHAPTER XVII.

ARBITRATION OF EXCHANGE—DEVELOPMENT OF THIS BRANCH OF EXCHANGE OPERATIONS—ILLUSTRATION OF ARBITRATION THROUGH LONDON ON PARIS—HOW GOLD WAS PROFITABLY SHIPPED HENCE TO THE FRENCH CAPITAL IN 1901—ACCURATE INFORMATION AND EXPERT SKILL ESSENTIAL FOR SUCCESS IN SUCH OPERATIONS—DIFFERENCE BETWEEN ARBITRATION AND ARBITRAGE NEGOTIATIONS.

The arbitration of exchange is one of the most interesting operations in the entire system, and thorough familiarity with the process must be possessed by exchange clerks. This branch of office work is seldom entrusted to junior assistants, the calculations being somewhat intricate and the necessary knowledge of such a character as is not ordinarily possessed or readily obtainable by inexperienced employees. Moreover errors are likely to occur in computations which, unless promptly discovered, often result in serious loss. To attain proficiency in operations involving arbitration of exchange the student must familiarize himself with the monetary systems of all commercial countries, those having silver and paper as well as gold currencies. He must also acquire a knowledge of the methods of quoting and the conditions usually governing movements in the exchanges of these coun-

tries and various other details which can best be learned by experience in a well equipped office. The rules for the computation of arbitration in exchange are laid down in the elementary works on arithmetic found in the schools, but there is a vast deal of information which is required for the successful working of the problems which knowledge must be obtained from other sources.

Before foreign exchange grew to be a completed system and while the operations were confined chiefly to the adjustment of commercial transactions between countries, exchange was drawn in a direct manner. This course was necessary because of the slow methods of communication through the post which made it impossible for drawers to obtain prompt advices of conditions of which advantage might otherwise have been taken. With the introduction of the telegraph came facilities for the drawing of circuitous as well as of direct exchange between European countries, and then followed the system of arbitration of exchange. This system had grown to be an important branch of the business in Europe long before the introduction of the Atlantic cable, and foreigners had attained such proficiency in arbitrations that when the cables became effective, foreign had a very decided advantage over American bankers. The latter were, however, quick to learn, and the system of arbitration of exchange was soon brought to as high state of perfection between this country and Europe as existed abroad. With prompt and constant cable communication with all parts of the world and with reliable advices of conditions favorable to all forms of exchange operations the skilled Cambist is to-day

enabled to extract a greater profit out of exchange drafts than could have been possible a quarter of a century or more ago.

Brooks, in his work on foreign exchange, defines arbitration of exchange as the remitting of money to one country through another country having a different monetary system, or the purchase of exchange or money of one country through another. An occasion for this will arise when the rate of exchange here upon a foreign country is much higher or lower than the rate between another country and the one to which remittance is desired. For illustration: Suppose a New York banker wishes to remit to Paris 25,250 francs and the best rate quoted is $5.17\frac{1}{2}$ francs. This would cost \$4,879.23 as is shown by the following computation: $25,250 \div 5.175 = \$4,879.23$. If a demand draft on London can be bought in New York at \$4.84, and if the cable reports London quotations for checks on Paris at 25.25 francs per pound sterling, it will be found that for £1,000 a check for 25,250 francs can be obtained in London on Paris and that the £1,000 demand draft bought in New York on London at \$4.84 would cost only \$4,840. Thus by remitting to Paris through London there would be a saving of the difference between \$4,840 and \$4,879.23, or \$39.23.

The shipment of gold hence to Paris in November, 1901, which was made necessary by the demand to remit in settlement of maturing loans, was covered or reimbursed through sterling at Paris on London, the process being arbitration of exchange, or the purchase of money of one country through another. The shippers of the gold could not profit-

ably export the metal either to Paris or London and obtain reimbursement through direct exchange for the reason that rates for sterling at New York on London were below the gold exporting point, and francs could not be obtained in sufficient volume for the purpose of reimbursement. At the time the gold was being shipped, however, exchange at Paris on London was favorable for arbitration operations. The gold was sent hence to the French capital and the reimbursing bill was drawn upon London. Exchange on Paris was obtained by the drawee of the bill and on the presentation of the draft it was met with the proceeds of the French exchange which he had procured, and the transaction was closed at a profit. Thus about \$16,000,000 gold was forwarded hence to Paris, and the shippers were reimbursed through the process of arbitration of exchange.

In conducting such operations it is essential that the banker shall be advised, through the cable, of the varying conditions of the markets abroad. In such markets as Paris and London, where the exchange transactions are always large, rates often fluctuate sharply and conditions change frequently. Consequently though the situation may be favorable one day it may suddenly become adverse, necessitating some modification of the method of arbitration. Moreover it frequently happens that after a successful negotiation has been effected by a banker, as the result of private information, his competitors may be advised of the favorable conditions prevailing and they also may draw in a similar manner. Hence each operator seeks to obtain for himself alone all possible infor-

mation regarding changes which are likely to affect his business. Sometimes a banker may find, upon calculation, that it will be profitable to conduct arbitration of exchange between three or more points; in such cases the conditions at each of the points must first be ascertained and calculations have to be made with the utmost care. Occasionally in drawing bills the banker, in order to take advantage of arbitration operations, will transfer credits, through the cable, from an adverse centre to a point favorable for his purpose. Indeed there are very many ways by which arbitration can be profitably conducted by bankers having the requisite facilities and the necessary skill for such operations.

Arbitration of exchange, it may be noted, differs entirely from arbitrage operations in securities. The former is wholly confined to what may be termed manipulation of exchange while the latter pertains to the business of buying or selling, through the cable, of securities on the foreign bourses taking advantage of the market fluctuations of such securities. Thus stocks bought in London may be profitably sold in New York or the operation may be reversed should conditions be such as to make it more desirable. Arbitrage operations are conducted almost exclusively by stock houses having the requisite facilities though the foreign bankers often effect such trades. The results of the negotiations influence the exchange market only when there has been an excess of buying or of selling between the regular European bourse settlement periods. If the balance should be in favor of New York, the resulting exchange

would be offered on the market; should the balance be adverse, bills would be in demand for remittance.

It will be observed that operations in arbitration of exchange require the services of men of the largest experience, and hence the business can be conducted to advantage only in the most thoroughly equipped offices. The exchange student who enjoys opportunities for practice in such offices and has the determination to qualify himself for this branch of exchange work by acquiring a knowledge of all of its intricate details will have no difficulty after such qualification in securing advancement. The field for operations in arbitration of exchange is continually and rapidly broadening, and there will probably always be a demand for the services of men capable of taking positions as managers of exchange houses or departments.

CHAPTER XVIII.

SUGGESTIONS FOR EXCHANGE STUDENTS—DESIRABILITY OF OBTAINING POSITIONS WHERE OPPORTUNITY FOR PRACTICAL KNOWLEDGE MAY BE HAD—VERIFICATION OF EXCHANGE CALCULATIONS USEFUL—THE BASIS FOR COMPUTATIONS OF FIXED PARS OF EXCHANGE—HOW CLOSE QUOTATIONS ARE FIGURED IN TRANSACTIONS IN BILLS.

The reliance upon tables in working foreign exchange calculations has become necessary owing to the fact that in offices where the business is large and where exchange in various currencies is constantly handled it would be impossible to compute each separate item in the time required for the despatch of the day's business or for the outgoing steamer. Moreover in large offices the drafts which are sent in by local exporters or are received by mail for sale or for the purpose of forwarding for collection have to be carefully examined for errors or for irregularity in execution, and this requires the supervision of clerks of experience, whose time must be devoted to this work to the exclusion of the computation of exchange rates or of other details. In offices where drafts are bought for immediate sale to bankers who make use of them in their business the same care is required to see that the bills are properly drawn and that they conform in

every respect to the requirements of bankers in foreign countries. It will be observed, therefore, that in houses where an active exchange business is conducted, there is a vast amount of detail essential to the proper management of the office, and this part of the work is fully as important as is that of the computation or the verification of exchange calculations.

The junior bank clerk, who has had experience in the domestic exchange department or in other branches of an institution where he has had opportunities for obtaining some knowledge of the first principles of foreign exchange, should, if he is desirous of making a thorough study of this branch of banking, seek to secure a transfer to the exchange department of his bank or to arrange for temporary employment in that office, or to obtain admission to some other well conducted establishment. His familiarity with the work in which he has been engaged will, if he has made fair progress in that branch of the banking business, enable him quickly to grasp the minor details of his new work and discover the difference in the methods of conducting transactions. With this practical experience and close attention to every detail he should soon become qualified for a subordinate position in the exchange department. This may not be so remunerative as was the position from which he was transferred, or which he temporarily or permanently left, but he should be willing to make some sacrifices in order to qualify himself for employment in a field where promotion, through merit, is likely to be more rapid than in almost any other branch of a banking establishment. If he has made a good

selection and has the advantage of careful and patient training by a competent manager he will, even if his early education has been deficient, most likely soon secure advancement.

The first thing to be done, is through diligent study, as rapidly as possible, to perfect himself in neglected branches. With a definite object in view, the acquisition of a thorough and practical knowledge of the exchange business, and with the incentive of probably remunerative and permanent employment the student will most likely make quite satisfactory progress. Though there are few text books on exchange there are in the libraries, and easily accessible, works on German and French and other languages, commercial and historical geography, and with a study of these and a review of the lessons in arithmetic and conversion of currencies which were taught him while at school, the student should soon qualify himself for his new work.

His attention should be concentrated upon his new curriculum to the exclusion of all else. He should avail himself of every opportunity to acquire knowledge of all details of his specialty and to this end he should closely observe, so far as can properly be permitted, the work in progress in other hands. Probably the most effective instruction he can obtain is that which will be acquired through the verification of the calculations of exchange tables, as prepared by skilled computists, and upon which the managers of exchange departments chiefly rely. In the process of such verification the student will naturally acquire a knowledge of how the fixed constant or the basis of the computation of the exchange rate is obtained. For ex-

ample he will find that the value of the pound sterling, or the Victoria sovereign, was fixed by act of Congress passed March 3, 1873, at \$4.8665. Unless the student should seek to know why and how this valuation was established he will be likely to fall into the error of accepting statements as facts without endeavoring to verify them. The above noted valuation of the pound sterling was established as a basis for computing, for the assessment of customs duties, the values of such imported goods as were stated in British money. The valuation is based upon the weight and fineness of the gold in the sovereign. This coin contains 113.001.605 Troy grains of pure gold. The United States dollar contains 23.22 Troy grains of pure metal. By dividing the weight of the pure metal in the sovereign by the weight of pure gold in the dollar—23.22 grains—the result is \$4.8665, the value of the sovereign in American money.

By pursuing the inquiry further it will be found that the number of grains of pure gold in the sovereign, as above, is obtained from the weight of standard gold in the sovereign which is 123.274478 Troy grains. The British standard is eleven-twelfths fine; hence the pure gold weighs 113.001.60476 Troy grains or 113.001.605 as above. This weight and fineness of the coin are established by an act of Parliament precisely as the weight and fineness of our gold dollar are fixed by law. The act of Congress passed January 18, 1837, changed the fineness of the gold coin to nine-tenths, preserving the weight of the standard eagle at 258 Troy grains or 232.2 grains of pure metal. The act of February 12, 1873, provided for the continued coinage of the

gold dollar, without changing either the weight or the fineness; hence the pure gold in the dollar weighs 23.22 Troy grains. As this is the intrinsic value of the dollar it is properly made the divisor in the calculation above noted, the dividend being the intrinsic value of the British sovereign and the quotient is the value in American money of such sovereign, and the nominal par of exchange between the United States and Great Britain. The value of the English shilling in American money is obtained by dividing the value of the sovereign—\$4.8665—by 20, the number of shillings in the pound; the quotient is \$.243325. The value in American money of the English penny is obtained either by dividing the value of the sovereign by 240, the number of pence in the pound, or by taking, as the divisor, 12, the number of pence in the shilling, and, as the dividend, the value, in cents of the shilling; the quotient, in either case, is \$.020277.

The course of exchange is influenced by supply and demand, time cost and other variable factors and rates for sight exchange move more or less irregularly between what are known as gold points, or the cost of transmitting gold in lieu of exchange between this country and Europe. Rates for sixty or ninety day exchange, known as bankers' long bills, are largely governed by the ruling rates for discount in London and, sometimes, by the rates for money in New York. Rates for commercial bills, or those drawn against commodities, usually, and especially when they are not discountable, rule at the lowest figures. The quotations for these various classes of drafts for each fraction between the extreme range are computed in the tables which

are used to facilitate the working out of exchange calculations. In buying and selling drafts, however, the use of smaller fractions or decimals of the pound often become necessary in order to close a transaction, and in such cases the rate is named at a certain price less one-eighth, one sixteenth, one thirty-second or three thirty-seconds of 1 per cent., and the computation is made upon the current price of the bill. For example one-eighth of 1 per cent. on a quotation of \$4.87 is \$.0060875 deducting which leaves the price \$4.8639125; less one-sixteenth of 1 per cent., or \$.00304375, leaves the net \$4.86086875; less one thirty-second of 1 per cent., or \$.001521875, leaves the net \$4.859346875 and less three thirty-seconds of 1 per cent., or \$.004565625, leaves the net \$4.85478125. In the daily work of an office the clerk will frequently be called upon to make out or verify such computations; hence he should seek to familiarize himself with the process of divisions by fractions and be careful, through verifications of his calculations, to avoid errors.

CHAPTER XIX.

COMPUTATIONS OF FRENCH EXCHANGE—PECULIARITY OF THE QUOTATIONS FOR FRANCS—SMALL SUPPLIES OF THIS CLASS OF BILLS IN OUR MARKET—ILLUSTRATIONS OF INDIRECT REMITTANCE TO PARIS THROUGH LONDON.

The French franc is the chief money of account in France, Belgium, Finland, Greece, Italy, Spain, Switzerland and Venezuela, though it is called by different names in countries other than Belgium. The United States Mint valuation of the franc is 19.3 cents. The coin weighs 4.978128 Troy grains, and as it is 900 fine the pure gold contained therein is 4.4803152 grains. To ascertain the equivalent value of the franc in American money the weight of pure gold in the coin is divided by the weight of pure gold in the United States dollar and the result is 19.295+ cents or, as stated by the Director of our Mint, 19.3 cents. The number of francs and centimes contained in the dollar is ascertained by dividing \$1 by 19.295 cents, as above; the quotient is 5 francs 1827 centimes. By taking 19.3 cents as the divisor, however, the quotient is 5 francs 18134+ centimes, which, stated as 5.18 $\frac{1}{2}$, is the par of exchange between this country and France. The par between France and Great Britain is 25 francs 2215 centimes. This value is obtained by dividing the

number of Troy grains of pure gold in the pound sterling, or 113.001605, by the number of grains of such gold in the franc, or 4.4803152; the quotient is 25 francs 2215⁺ centimes.

Francs are quoted in the United States by the number of francs and centimes to the dollar—thus 5.18 $\frac{1}{2}$ to 5.17 $\frac{1}{2}$ —the first being the bid and the last the asking price. The reason for this method of quotation, which, it may be noted, is the reverse of that in other kinds of exchange, is that at the apparently higher rate, 5.18 $\frac{1}{2}$ the bill would cost less than at the apparently lower rate. This is illustrated by H. K. Brooks, in his work on foreign exchange, by the following: \$5,000 at 5.15 would give 25,750 francs, while this number of francs—25,750—at 5.20 would only cost \$4,951.92. There is another peculiarity about quotations for francs and that is that the difference between the bid and the asking price is $\frac{5}{8}$ of a centime, as is shown above in the quotation of 5.18 $\frac{1}{2}$ to 5.17 $\frac{1}{2}$. The reason assigned by Mr. Brooks is that $\frac{5}{8}$ of a centime is equivalent to one-eighth of 1 per cent. in the pound sterling, and because most of the French exchange was formerly covered or paid through English exchange, this method served as a convenience in figuring. Another explanation is that as there are five francs to the dollar, one-eighth of 1 per cent. on one franc would call for five-eighths of 1 per cent. on five francs.

Ordinarily, and almost always in transactions for small amounts of francs, this difference of $\frac{5}{8}$ of a centime is the smallest. In large sums, however, and where there is active competition, necessitating closer quotations, this fraction is divided by six-

teenths, and thirty-seconds, and these fractions are quoted as plus or minus, though most frequently as minus. The fraction of one-sixteenth, for example, when quoted as minus, or less, means that it is one-sixteenth of 1 per cent. of the quoted price of the franc. But the fraction must be added to the price, for the reason above noted, when it is desired to demand more for the franc. Thus: In the quotation of $5.18\frac{1}{8}$ less one-sixteenth to $5.17\frac{1}{2}$ the result, decimally stated, is 5.18448828125 to 5.1750. Less one thirty-second the result is 5.182869140625 to 5.1750. Less three thirty-seconds it is 5.186107421875 to 5.1750.

The course of French exchange, in the New York market, is within comparatively narrow limits. One reason is that the volume of such exchange is small and usually only sufficient for the purpose of direct mercantile remittance. The facilities offered by the cables for keeping closely in touch with the Paris market and the activity in exchange at Paris on London enable those of our bankers who are remitting to France to resort to indirect or circuitous exchange operations, drawing on London and covering with French exchange, and thus they sometimes obtain greater advantage than they could by direct remittance. The range in the New York market for bills on France during 1901 was between the gold export point of about $5.15\frac{5}{8}$, less one-sixteenth, and 5.20. Though the movement of gold hence to Paris was unusually large in that year, very little if, indeed, any of the metal was covered with francs drawn in New York, the reimbursing drafts being made upon London where they were covered with French exchange in that market,

Still another reason for the comparatively small transactions in francs in New York is that the principal bankers in this city have correspondents in London who have houses or other connections in Paris, through whom they make settlements, and these adjustments are effected at a more satisfactory profit than would be possible with negotiations directly between New York and Paris.

A convenient method for determining the possible profit of remitting to Paris by the way of London, is by multiplying the rate of exchange at Paris on London, as reported by the cable, by the value of a franc in American money. The result of the computation will show the profit or loss in making the draft. The calculation is illustrated by the following: Exchange at Paris on London 25.145×19.3 , the value of a franc = \$4.852985. Add $\frac{1}{8}$ of 1 per cent. time cost in transit and for stamps and commissions = \$4.85905. With sight sterling at \$4.86 there would be a slight advantage in indirect remittance, and this profit would be augmented by a lower rate for French exchange. A decline in such rate to 25.10 would make the price of the bill \$4.850365, giving a greater profit with sterling exchange at \$4.86. It may be noted that in transactions in francs between Paris and London the smaller price represents the lower and the greater price the higher rate.

It will be observed that in the computations of the par of French exchange and of the price of such exchange, less the smaller fractions given above, the calculations have been carried to the farthest decimal. This has by no means been done with a view to the discouragement of the student of ex-

change, but for the purpose of his instruction and also of as accurately as possible giving the results of the computations, some of which, especially where large amounts are involved, may be useful. In practice the valuation of the franc, as stated by the Director of the United States Mint—19.3—will serve ordinary purposes. So also will an abridgement to three decimals of a centime of the results of the computations for the price of the franc less one-sixteenth, one thirty-second and three thirty-seconds, be sufficiently accurate. In the tables contained in Mr. H. K. Brooks' work on exchange, the computations for all kinds of bills have been made for amounts up to \$100,000 on francs and the necessary decimals are given. The author of this publication has also computed the smallest fractions of the franc in common use with a view to facilitating the work of an office. Still, as has heretofore been suggested, the student should familiarize himself, by verifying the computations, using the processes given instead of relying wholly upon the tables.

CHAPTER XX.

GERMAN EXCHANGE COMPUTATIONS—METHODS OF QUOTING REICHSMARKS—ARBITRATION OPERATIONS THROUGH LONDON—THE CALCULATIONS IN BROOKS'S TABLES COMMENDED.

The monetary unit in the German Empire is the reichsmark, or, as it is commonly called, the mark. Its value in United States currency, as periodically proclaimed by the Director of the Mint, is .238 cents. This valuation is computed, as in the case of other foreign gold monetary units, by dividing the weight of the pure gold in the mark by the weight of pure metal in the dollar. The mark weighs 6.1458 Troy grains and the fineness is nine-tenths; hence the weight of the pure gold is 5.53122 grains. The pure metal in the dollar weighs 23.22 grains. Taking the latter as the divisor and the weight of the pure gold in the mark as the dividend the quotient is .2382+ cents. The United States Mint valuation of .238 cents is, however, accepted as the par of exchange between this country and Germany, as .193 cents is so accepted between the United States and France and \$4.8665 between this country and Great Britain.

In the majority of exchange transactions between Germany and the United States it is the custom of bankers, instead of quoting the single mark, to quote the equivalent of four marks to the dollar,

or .952 cents. In smaller transactions, however, and in cities other than the principal centres the exchange rate named is for the single mark or .2385 cents. The fractional quotations, on the basis of four marks to the dollar, are by eighths, sixteenths and thirty-seconds, either plus or minus these fractions as occasion may require. In calculating marks quoted in this manner the quotation must first be divided by 4, to get the rate for one mark. The quotient is then used as a divisor and the amount to be invested in the exchange is taken as the dividend; the quotient is the number of marks and pfennige required. In computing the amount of American money which will be needed to buy a stated number of marks and pfennige the quotation for four marks is first converted into that for a single mark. This is multiplied by the stated number of marks and pfennige and the result is the sum of money required for their purchase. The process of computation on the basis of a quotation for a single mark is the same with the exception that the conversion from four marks to the single mark is unnecessary. Examples of these processes are clearly worked out in Brooks' Foreign Exchange. This publication also has tables of computations of rates for German exchange at the smallest fractions, in use as above noted.

The par of German exchange between Germany and Great Britain is 20 marks 43 pfennige. This par is calculated by taking as the divisor the number of Troy grains of pure gold in the mark as above, and as the dividend the number of such grains in the English sovereign—113.001605—the quotient is 20 marks 429⁺ pfennige, or, as is deci-

mally stated, 20.43 marks. While sterling at Berlin on London, represented by the above rate, does not ordinarily sharply change, sometimes the fluctuations are such as to be significant of important financial movements at the German capital and, therefore, the Berlin rate on London is more or less closely watched by our foreign exchange houses, in order to take advantage of conditions favorable to arbitration in exchange or other operations. The gold points for exchange at Berlin on London are 20.52 marks for export to and about 20.34 marks for import from London, and movements of the rate toward either points often have a direct influence upon monetary conditions at the British capital and indirectly upon New York exchange on London and on Germany.

Exchange on Germany, as indeed is the case on the other chief continental countries, is drawn with cables, banker's short and long bills and commercial drafts. The volume of banker's exchange is not large and it is ordinarily only sufficient for direct remittance. Most of the banker's business between New York and Berlin is conducted through London, though some of our most important exchange houses have, among their correspondents, the principal banking establishments in the German capital with which they directly transact their business, usually maintaining and employing large credits and negotiating loans advantageously.

The tables in Brooks' work on exchange give rates for four marks from 93 to 97 $\frac{7}{16}$, with the smallest fractions, and also rates for single marks from 23 to .2495 cents; computations for each method of quotation are carried out in exact deci-

mals. The computations are also made for the conversion of marks into dollars, francs and into sterling and of dollars, sterling and francs into marks. Indeed every possible calculation which may be required for the working of German exchange seems to be supplied by this publication. Among the valuable tables contained in this book is one giving the cardinal numbers and commercial terms in the German and in nine other languages. This will be of great assistance to those students of exchange who may be deficient in foreign languages.

CHAPTER XXI.

MONETARY UNITS, SYSTEMS AND PARS OF EXCHANGE OF VARIOUS CONTINENTAL AND ASIATIC COUNTRIES—THE BASIS ON WHICH PARS ARE COMPUTED.

Though our commercial transactions with European nations, other than Great Britain, France and Germany, are settled chiefly with drafts through London, bills for direct operations between the United States and these countries are often drawn and sometimes exchange conditions at such points may be favorable for profitable arbitration. It would seem desirable, therefore, that the student should seek to familiarize himself with the methods of ascertaining the equivalents in American currency of the monetary units and also with the monetary systems of these countries.

In 1892 Austro-Hungary replaced the silver standard by that of gold, and since then the crown, or kronen, has been the monetary unit. The United States Mint value of this unit, and hence the par of exchange, is stated at .203 cents. The standard weight is 5.2277616 Troy grains, the fineness is nine-tenths and the pure gold represented in the unit is 4.70498544 Troy grains. This weight of pure metal divided by 23.22 grains of pure gold in the dollar gives .202626, or as stated by the mint authority, as above, .203 cents. Brooks has tables for the con-

version of the crown and the heller—100 of which are equal to a crown—into American currency and vice versa. The gold coins are the quadruple ducat, double ducat, the ducat, sovereign, half sovereign, and multiples of the crown and of the florin.

The unit of the Scandinavian monetary system is also the crown or kroner. The valuation of this unit as fixed by the Director of the United States Mint is .268 cents. The standard weight of the unit is 6.9141 troy grains, the fineness is nine-tenths, and hence the pure gold weighs 6.22269 Troy grains. This weight divided by the 23.22 grains of pure metal in the American dollar gives .268 cents. Denmark, Norway and Sweden are embraced in the Scandinavian system. We again refer to Brooks' tables for the conversion of the kroner and the ores—one-hundredth of a kroner—into American money. It may be noted that the Scandinavian monetary union was formed in 1873 when the silver standard of the above named countries was replaced by that of gold on the basis of the krone.

The monetary unit of Russia is the rouble, or ruble, the United States Mint valuation of which is .515 cents, though until 1897, when, by Imperial ukase, the equivalent of one and a half paper rubles was made one gold ruble, the valuation was .772. The standard weight of the unit is 13.273894 Troy grains, the fineness is nine-tenths and the pure gold contained therein is 11.9465046 Troy grains. Taking this weight as the dividend and 23.22 grains of pure metal in the dollar as the divisor the quotient is .511449 or, as above stated .515. The gold coins are of ten and five rubles, Imperials and half Imperials, and the minor coins are copecks or kopecs,

one hundred of which equal one ruble. Brooks' tables have rates in American currency for exchange drawn in rubles and kopecks.

The Latin Union was formed in 1865 between France, Belgium, Switzerland and Italy with the object of establishing the coinage ratio on the basis of one of gold to fifteen and a half of silver. In 1868 Greece was admitted, though the universal introduction of the French monetary system into the country was not effected until 1883. In 1868 Spain adopted the French system with the peseta, or franc, as the unit; the coinage of gold Alphonse of twenty-five pesetas did not begin until 1876. The monetary unit of Finland was established in 1877 on the basis of the finmark or franc. The units of France, Belgium and Switzerland are francs of .193 cents, of Finland, the finmark, of Greece, the drachma, of Italy, the lira and of Spain the peseta, all of the same valuation in American currency of .193 cents, as established by the Director of the United States mint. The weight of the pure gold in the French franc—4.4803152 Troy grains—is also the weight of the metal in the monetary units of Roumania, Bulgaria and Servia in Europe, of the Argentine Republic, Venezuela, the United States of Colombia, Ecuador, Peru, Bolivia and Paraguay in South America, and of Costa Rica, Nicaragua, Honduras, Salvador and Guatemala in Central America, though the units are called by different names. Therefore, .193 cents is the value of the unit and the par of exchange between the United States and these countries, thus greatly simplifying exchange operations. Bills on South American countries are usually drawn in the United States

dollars, and on Central American states in United States and in Mexican dollars.

The monetary unit of Holland, or the Netherlands, is the gulden or florin, the pure gold represented in which weighs 9.333489 Troy grains. Dividing this weight by the 23.22 Troy grains of pure metal in the dollar gives .4019 cents or, as stated by the Director of the United States Mint, .402 cents, which is the par of exchange between this country and Holland. The gold coins are ten and five gulden, ducats and double ducats and the silver coins are the Rix Daler, two and a half, one gulden and one-half gulden; minor coins are cents, one hundred being equal to one gulden or guilder.

The unit of Portugal's monetary system is the milreis which contains 25.088524 Troy grains of pure gold. Brazil also has the milreis as its unit, though the value is only about one-half that of Portugal. The United States mint valuation of the Portugese unit is \$1.080, which result is obtained by dividing the weight of the pure gold in the milreis by 23.22, the weight of the pure metal in the dollar. The gold coins of Portugal are ten milreis, or coroa, five milreis or half coroa, two and one milreis. One thousand reis equal one milreis. Brazilian milreis have a value of .546 cents and the coins are twenty, ten and five milreis.

The monetary unit of Turkey is the piastre, the United States Mint valuation of which is .044 cents. The pure gold represented in the unit weighs 1.020799 Troy grains. Dividing this weight by the 23.22 grains of pure metal in the dollar gives .043962 cents or .044 as above stated. The Turkish pound of medjidie of 100 piastres has a valuation of

\$4.3962. Other gold coins are five hundred piastres, \$21.98, two hundred and fifty, fifty and twenty-five piastres.

The unit of the Egyptian monetary system is the pound, of one hundred piastres, which is valued by the Director of the United States Mint at \$4.943. The pure gold in the unit weighs 114.778088 Troy grains. Taking this weight as the dividend and the 23.22 Troy grains of pure metal in the dollar as the divisor, the quotient is \$4.9430. The gold coins are the pound, half pound, and twenty, ten and five piastres. It will be observed that the pure gold in the Turkish pound weighs 10.921705 Troy grains less, and that the pure metal in the Egyptian pound weighs 1.776483 grains more than the pure gold contained in the British pound.

The Asiatic countries, with the exception of India, China, Japan and Persia, practically have no monetary systems and no gold currency. The money of account of these countries is silver or baser metal, and the variable value of the former requires constant revision of computations of exchange quotations between these and the gold standard countries of the rest of the world. Generally speaking, all settlements are effected with exchange on London or on the European continental centres. It is expected, however, that when International banks shall be established in the Orient exchange in dollars will be drawn instead of in British sterling.

British India has as the monetary unit the rupee which, however, is the money of account, and it is current at 15 rupees to the British sovereign, which coin is the standard in India. The latest United States Mint valuation of the rupee is .324 cents, and

this value is determined by consular certificate. The Indian gold coins are the mohur of fifteen rupees, \$7.10; ten rupees, \$4.72; five rupees, \$2.36, and the double mohur, \$14.20.

China has a currency of silver represented by the tael, the value of which varies according to the locality and also according to the price of silver in the London market. Mexican dollars constitute the principal silver circulating medium; most of these are chopped or stamped by local merchants or governors. The United States Mint valuation of the tael ranges from .632 cents at Shanghai to .696 cents at Taku. In fixing the valuation of the Haikwan tael for the purpose of adjusting payments of the Chinese indemnity the Plenipotentiaries made the equivalent in American dollars .742 cents.

The monetary unit of Japan is the yen, the United States Mint valuation of which is .498 cents. Until 1898, however, it was .997 cents; then the weight of the pure gold contained in the yen was reduced to 11.574266 Troy grains, lowering the value of the unit about one-half.

The African states and colonies, except Tunis and Zanzibar, have no independent monetary systems and exchange transactions are either in British sterling or francs or marks, or United States dollars. The old monetary unit in Tunis was the piaster; it is now the franc. Zanzibar has as the unit a dollar of .984 cents. Australia has as the unit the pound sterling. The gold coins are the sovereign, Australia half sovereign, five guinea, two and one guinea and half and quarter guineas.

CHAPTER XXII.

THE TRANSATLANTIC CABLE AND EXCHANGE OPERATIONS—EVERY COMMERCIAL CENTRE OF THE WORLD NOW IN TELEGRAPHIC COMMUNICATION—ARBITRAGE AND ARBITRATION TRANSACTIONS FACILITATED—THE ELEMENT OF CHANCE ENTIRELY ELIMINATED—CABLE TOLLS REDUCED TO A MINIMUM—CABLE TRANSFERS OF GOLD—HOW THE PHILIPPINE INDEMNITY WAS PAID.

A most marvelous revolution in the methods of operating in foreign exchange was wrought by the Atlantic cable. This medium of instantaneous transmission was applied to commercial and to exchange uses almost immediately after the completion in 1866 of the line of communication between Trinity Bay, Newfoundland, and Valentia Bay, Ireland. This enterprise was so successful that it encouraged the laying of other transatlantic cables and also of similar means of communication, wherever practicable throughout the world, and now there are in active operation submarine cables to the number of 318, varying in length from 14 to 17,359 miles, and aggregating 146,419 miles. In addition there are 1,142 cables of an aggregate length of 19,880 miles, which are owned by various governments, Great Britain alone having 246 cables of a length of 3,908 miles.

In 1866 our international commerce amounted to

\$652,232,289, growing the next decade to \$728,959,053, in 1886 to \$898,911,504, in 1896 to \$1,091,682,874, and it is now about two and a half billions of dollars annually. The enormous increase in our international trade indicated by these statistics is unquestionably largely if not almost entirely due to the facilities for constant and instantaneous communication afforded by the submarine telegraph lines which, with the connecting land lines, unite every commercial centre of the world. Though bills of exchange are drawn in almost the same manner now as they were before the installation of cable lines, the banker now operates in such bills much more effectively because of the information which he obtains through the cable of the actual conditions of the market abroad in which his operations are conducted. Before cable communication was established mail advices had to be awaited, and the most frequent of these was not oftener than twice a week. Consequently there was an element of chance affecting the banker's calculations which, though generally resulting to his advantage, was likely at times to prove more or less disastrous, for there was always a possibility of the occurrence of some unforeseen event in the interval between the departure of the steamers, which would entirely derange all calculations. Hence exchange operations were required to be conducted with the utmost caution to avoid possible loss, and, necessarily, dealings in exchange were more or less restricted in volume.

Instantaneous and accurate cable reports brought all the markets of Europe within touch, and as these cable lines were extended, the markets

of the entire commercial world into closer communication. The merchant was kept constantly advised of the fluctuations in prices of the goods in which he dealt; the banker was apprised of monetary and also of political or other changes which, in a greater or less degree, affected the financial situation; he was enabled to employ his balances to the greatest possible advantage by diverting, through cable orders, from one point to another money or securities awaiting profitable investment, and he could calculate with the utmost exactness the cost of the exchange in which he operated. The European stock bourses were likewise brought, through the cable, into close communication with our own stock market. Trading in American securities, which had previously been restricted to investments, assumed a speculative form. Though there was an important difference in time between London and New York, operations at the former centre could be conducted for at least a portion of the day almost simultaneously in the two markets, orders to buy in one being executed in the other, through arbitrage operations, with remarkable celerity. Thus were speculative transactions vastly broadened, and the security markets of Europe opened, resulting to the direct advantage of commission houses and of the foreign bankers who engaged in this branch of business. Moreover, the entire elimination of the element of chance in all transactions in which the cable was employed enabled them to be conducted with almost the certainty of success.

The construction of cable codes has reduced to a minimum the cost of messages, and thus cable communication has been brought into almost constant

use, as is indicated by the estimate that more than six millions of messages are transmitted annually. Competition of cable lines, through new construction, has decreased the tolls from \$5 per word, which was the tariff on the original transatlantic line, to twenty-five cents per word, thus placing cable communication within the reach of all correspondents. The perfection of the system of operating has lessened the time occupied in transmission from eight words per minute originally to fifty words. This saving of time through rapidity of transmission is often of the utmost importance to remitters, who are thereby enabled to defer almost until the last moment settlements which they are required to make in order to meet their contracts.

One branch of the banker's business, that of transferring gold between far distant points, has been brought to great perfection through the cable. An interesting illustration of this movement was given in 1900, when conditions prevailed which required the import of gold from abroad in such a manner as to cause the least possible disturbance to the European financial centres. A consignment of an important amount of gold was about to be forwarded from India to London for the account of the Bank of England. A New York banking house being advised of this fact, successfully negotiated, through the cable, for the purchase of the metal, which was in British bars. While the gold was in transit arrangements were made with the Bank of England for the exchange of the gold on its arrival in London for American bars. The exchange was accordingly made and the gold brought hither at a profit really greater than would have been realized

had the bars, originally purchased, been trans-shipped at London for New York.

One comparatively recent transaction of historical interest, will illustrate the usefulness of the cable in conducting international settlements. At the end of April, 1899, after the ratification of the treaty of peace between the United States and Spain, the State Department made requisition upon the Treasury Department for \$20,000,000 in gold to pay the Philippine indemnity. Warrants for the amount were drawn and made payable to the order of M. Cambon, the ambassador from France to the United States, who represented, in this transaction, the Spanish Government. The National City Bank had contracted, through its correspondent, the Deutsche Bank of Berlin, to receive and transmit to Berlin this indemnity. In making preparation therefor credits to a sufficient amount were accumulated by the City Bank and placed with its correspondent. The above noted warrants were deposited by M. Cambon in the City Bank for collection, and the money was paid by the New York Sub-Treasury to the bank, through the clearing house. Thereupon the bank notified its correspondent through the cable of the payment of the indemnity, which notification was accepted by the Deutsche Bank as the equivalent of a draft upon the accumulated credit, and the money was paid over to the Bank of Spain for account of the Spanish Government.

It is noteworthy that not a dollar of the gold was bodily transferred from the Sub-Treasury vaults. In order to avoid the risk and cost of the daily transportation to the clearing house of gold in payment of debit balances due by the Assistant Treas-

urer, a form of receipt had been devised representing the theoretical deposit of gold. The manager of the clearing house would theoretically receive from the Assistant Treasurer gold in payment of the latter's debit balance, and he would thereupon theoretically deposit the gold with that official, taking his receipts therefor, which receipts would be drawn in divisional amounts for the convenience of banks who daily required gold for deposit in the customs fund of the Treasury for the payment of duties. When the warrants for the Philippine indemnity were paid through the clearing house, payment was made in the manner above stated, with the Assistant Treasurer's receipts, and the latter were accepted by the City Bank in lieu of gold, thus saving the trouble and expense of transporting forty tons of the metal from the Sub-Treasury to the bank and its subsequent return in the regular course of business. In the process of paying the indemnity it will be observed by the above that not only was the money market freed from disturbance, but there was no derangement to the exchange market, the credits preparatory to the payment having been gradually accumulated, and the cable facilitated the final settlement.

CHAPTER XXIII.

ADVANTAGES OF THE PROPOSED TRANSPACIFIC CABLE—OBSTACLES TO ITS CONSTRUCTION NOW OVERCOME—LENGTH OF THE SECTIONS OF THE NEW LINE—OUR COMMERCE WITH THE ORIENT WILL BE PROMOTED BY THE INSTALLATION OF THE CABLE AND EXCHANGE TRANSACTIONS FACILITATED—MANILA THE BASE FOR OUR ORIENTAL COMMERCIAL AND FINANCIAL OPERATIONS.

The assertion that submarine electric wires have invaded every ocean except the Pacific will not long be true. If the enterprise now undertaken shall be successful there will, within the next year, be cable communication with Honolulu and, within two years, with Manila, thus giving Americans an unbroken line between San Francisco and our Pacific possessions. Then will the electric wires literally encircle the globe.

The chief obstacle heretofore existing to the establishment of a trans-Pacific cable system was found in the fact that the necessary mid-ocean resting places could not be satisfactorily obtained or arranged for, no single Government controlling a sufficient number of suitable landing places to make a cable system practicable, in view of the belief that the distance through which messages could be sent and cables controlled was limited. The annex-

ation by the United States Government of the Hawaiian Islands and the acquisition of Guam, of Wake Island and of the Philippines, which resulted from the war with Spain, removed the above-noted obstacle and since then the necessity of direct and independent cable communication with our outlying possessions in the Far East has almost daily grown more imperative. These acquisitions have provided such desirable resting and landing places for the proposed cable that the greatest length of the line, 2,089 miles, between San Francisco and Hawaii, will be shorter than the longest trans-Atlantic line, which is 3,250 miles, between Brest, France, to Cape Cod, Mass., and this length will be 45 miles less than that of the first trans-Atlantic cable between Trinity Bay, Newfoundland, and Valentia Bay, Ireland. The distance from Hawaii to Wake Island is 2,040 miles, from this island to Guam 1,290 miles, from Guam to Manila, 1,520 miles, and from Manila to the Asiatic Coast, 630 miles. This will make the entire length of the proposed cables 7,569 miles; and what is of greatest importance is the fact that they will be operated and controlled by an American enterprise. The route now taken by messages hence to Manila is through the Atlantic cable to England, thence by cable and land lines to Suez, Bombay, Singapore, Saigon, Cochin China, Hong Kong and Manila, a distance of 14,000 miles, at a word rate of \$2.35. As a matter of course, when the more direct route through the Pacific cable shall be completed tariffs will be reduced, for then there will be active competition.

The advantages which must result from the open-

ing of telegraphic communication with the Hawaiian Islands will be so great as to encourage the energetic prosecution of cable construction to connect the Philippines, and it seems probable that within the now estimated time the completed line between San Francisco and Manila will be in operation. Even with the advantage of comparatively frequent mail service between the Pacific ports and our far eastern possessions our commerce with the Orient is only 7 per cent. of that of the countries of Asia and Oceanica, lying commercially adjacent to the Philippines, which commerce amounts to more than \$2,125,000,000 annually, and this, too, despite the fact that the imports into these countries are largely composed of articles produced in the United States. The installation of cable communication will doubtless so greatly facilitate our trade with the Orient as to make necessary the establishment of more frequent means of transportation, and the growth of our commerce will thereafter be rapid. The success of the tentative tests which are being applied to the system of mail transportation between Australia and London, via San Francisco, will in all probability result in the diversion of this mail service from the Suez to the Pacific, transcontinental and Atlantic route, and in the construction of new steamers. Thus will our commerce with the Hawaiian Islands be given opportunity for further expansion, the steamers sailing from Sydney, N. S. W., connecting with Honolulu.

Since May, 1898, when Dewey's victory over the Spanish fleet in Manila Bay practically gave us possession of the Philippine Archipelago, the attention of American merchants has been more or less con-

centrated upon these islands, and careful study has been made of the conditions and the possibilities for the commercial development of these new acquisitions. Commissions which have been charged with official inquiries regarding the resources of these islands have made exceedingly valuable reports, enabling our merchants and capitalists to form an accurate judgment as to the opportunities offered for profitable investments. Naturally, Manila has been selected as the base for such enterprises, and it will doubtless, for this reason, be developed more rapidly than will other probably equally desirable centres in the Philippines. Eventually, therefore, Manila will become the base for all our Oriental commercial and financial operations. The most recent official investigation has been directed to currency conditions and needs, and doubtless this will result in the adoption by Congress of legislation having for its object the establishment of the currency of the Philippines upon a stable foundation. This is highly essential to safe and profitable commercial transactions, for, with a currency of fluctuating value, such as that which now exists, foreign and domestic exchange operations must be conducted with more or less uncertainty as to profit.

CHAPTER XXIV.

FINANCIAL AND EXCHANGE OPERATIONS IN THE ORIENT—THE BUSINESS CONTROLLED BY FOREIGN BANKS—HOW EXCHANGE IS NEGOTIATED—A RECENT MOVEMENT OF GOLD HITHER FROM AUSTRALIA EXPLAINED.

Though Australia may not be considered as actually an Oriental country, it is so closely allied to the Far East commercially that it may not improperly be regarded as of an importance, so far as trans-Pacific trade is concerned, equally as great as China or Japan. Including Australia there is a population of 600,000,000 along a coast line of 8,000 miles, reaching from Melbourne to Vladivostok in Siberia. The annual trade of these millions of people exceeds two billions of dollars. America's commerce with this vast population is about one-tenth, and the exchange operations resulting from this commerce of \$200,000,000 is wholly conducted through banking houses having foreign connections. America's commerce with China alone is now about \$40,000,000, while that with Japan, though somewhat smaller, promises soon to equal this amount.

European interests in banking are represented in the Orient in nearly all cities where foreigners reside or visit, and these interests naturally seek by

every means in their power to promote the trade of their own countrymen, thus placing somewhat at a disadvantage American competitors for that trade. Notwithstanding this drawback, however, Americans have made marvelous commercial progress in the Orient, not only in China and in Japan, but in Australia, and doubtless very soon the banking field will be occupied by our capitalists as has the commercial field by our merchants and manufacturers.

The largest of the foreign banking concerns in China is the Hong Kong and Shanghai Bank, which was incorporated in Great Britain in 1864. It has a capital of \$10,000,000, and though its main office is at Hong Kong, it has branch banks at nearly all the open ports of Asia. The other foreign institutions having representatives in the Orient are the Chartered Bank of India, Australia and China, capital £800,000, with its head office in London; the Deutsche-Asiatische Bank, the principal office of which is in Berlin, and the Russo-Chinese Bank, whose head office is in St. Petersburg. These institutions do a general banking business, receive deposits, discount local bills and draw and negotiate foreign exchange. The Union Bank of Australia, which likewise transacts a foreign banking business, is a British corporation located at Melbourne, and it has correspondents in the chief Oriental cities.

The currency in which business is chiefly done by the Chinese banks and by those in the Philippines is the Mexican dollar and the British dollar. These coins have an equal legal value not only in China but in the Straits settlements. This value, how-

ever, fluctuates, as does that of the Haikwan (customs) tael, consisting of one and one-third ounces of silver—the currency at the Chinese treaty ports—according to the price of silver as determined by the quotations for this metal in the London market. In the Philippines, and especially at Manila, the Mexican dollar is reckoned, for local trade purposes, at 50 cents gold. Large commercial transactions in the islands as well as elsewhere in the Orient are, however, based upon the exchangeable value of the dollar, which often fluctuates from day to day; during the first six months of 1901 the range was from 50.9 to 47.3 cents in gold. This variable-ness in value of the Mexican dollar affords opportunity for large profits by bankers dealing either in foreign or domestic exchange. The banking business in the Orient is highly remunerative, and through long experience and the combination in some cases of warehousing with banking the managers of these financial institutions have obtained control of the most valuable of the commercial transactions of the Far East.

The process of conducting Oriental exchange operations is practically the same as that employed for other exchange transactions, with the exception that, because of the distance, long sterling and cable transfers are preferred to other forms of exchange. Merchandise exported hence to any portion of the Orient is accompanied by bills of lading and other documents, as in the case of exports to Europe, but the comparative infrequency of communication necessitates the concurrent forwarding also of the commercial exchange draft representing the gold value of the goods. When the consignment

is sold, silver is received in payment, and in remitting or drawing for the proceeds of the merchandise the silver is converted into gold, at the current rate of exchange, thus affording opportunity for profit to the banker negotiating the bill. Exchange drafts upon the Orient are made either through London or through the head offices on the continent of the banks upon which the bills are drawn, and this method affords opportunity for additional profit to the bankers handling the bills. Thus in the case of a single consignment profit is extracted from the original commercial draft, the banker's bill drawn against the credit, the conversion of the currency and the interest account making the charges against the bill in many instances exceedingly heavy.

The profits of banking operations chiefly result from the buying and selling of exchange and, as a rule, the charge for such negotiations is computed at the rate of 6 per cent. on the money advanced on bills of lading for the period consumed in obtaining returns. As this time is from ninety to one hundred and twenty days the charge amounts to an important sum on each transaction. Bankers in the Orient loan money for local purposes at rates ranging from 6 to 8 per cent., according to the circumstances, and as 6 per cent. is the minimum the profits are usually satisfactory. There is also opportunity for gain in advances on goods in warehouse and in various other ways which have greatly contributed to the revenues of the foreign banks in the Orient. As a matter of course, the larger the capital the greater will be the profits which the new American banks, when they shall be established, will enjoy, for, with

abundant means and facilities for obtaining business the operations of the institutions can be almost indefinitely extended. The American bank at Manila has a capital of only \$100,000, but it is represented as doing a very profitable business though its operations are entirely local.

The interest on transactions with the Orient is always an important factor in determining in what form a remittance shall be made whether with gold or with exchange. This interest charge, for example, had a decided influence in the movement of gold hither from Australia in the summer of 1891. In remitting to California, the bank through which the remittance was made, calculated the time required for the passage of a draft from Melbourne to London; the discount on the draft and upon the bill covering the transaction or the reimbursement of the credit and other items of importance. Against this cost calculation was made of the shorter time consumed in remitting gold to San Francisco; of the facilities extended by the United States Treasury for the free transfer of the gold, through assay office check, across the continent to New York, and of the broader market in this city for the exchange resulting from the transaction. Practically the gold was placed in New York at the mere cost of transportation from Melbourne to San Francisco, and the remittance was doubtless effected at a far less cost than would have been incurred by remittance with exchange via London. Had not the United States Treasury extended the facility of free transfer of the gold across the continent, considerations as to the interest charge might have necessitated a resort to a draft instead of a direct

gold importation, despite the adverse exchange conditions which presumedly prevailed at Melbourne.

Hong Kong is the chief exchange centre of the Far East, as London is the exchange centre of Europe. Drafts upon Hong Kong are made in sterling, or in marks, francs or roubles, according to the nationality of the house through which they are drawn. Drafts made in Hong Kong upon America, to be negotiated through London, are calculated in dollars upon the basis of the current exchange value of the Mexican dollar in gold. For example, the exchange at Hong Kong on London might be calculated at one shilling ten and a half pence to the Mexican dollar, which would be the equivalent of about $45\frac{1}{2}$ cents gold, and the draft would call for the amount in gold dollars to be remitted. So with drafts made in America upon Hong Kong through London, though the bill of exchange would, in this case, be drawn in gold dollars and settlement would be effected by the conversion of the gold into Mexican dollars.

CHAPTER XXV.

HOW THE GOLD BASIS FOR EXCHANGE IS CALCULATED—THE WEIGHT AND FINENESS OF THE CHIEF MONIES OF ACCOUNT IN SIXTEEN GOLD STANDARD COUNTRIES—VALUES AS STATED BY THE UNITED STATES MINT DIRECTOR—THE PRICE OF GOLD ESTABLISHED BY LAW AND UNIFORMITY THEREIN SECURED.

This chapter on foreign exchange treats of the chief moneys of account of the various commercial nations; of the variableness of such moneys caused by the different weights and fineness of the metal contained therein, and of the invariable or fixed price of the pure gold, which is the standard governing all measures of values.

We select from Norman's Cambist the following table, showing the chief moneys of account of sixteen of the gold-standard countries, the gross weights of these moneys in Troy grains, on issue from the mints, and the proportion of pure gold contained therein:

Country and monetary unit.	Weight. grains.	Percentage pure gold.
Egypt, pound.....	131.174958	875
Great Britain, pound....	123.274478	916 2-3
Turkey, pound.....	111.3598	916 2-3
United States, dollar....	25.8	900

Russia, rouble.....	19.910817	900
Portugal, milreis.....	27.3965	916 2-3
Uruguay, peso.....	26.1887	917.9
Argentina, peso.....	24.89064	900
Chile, peso.....	23.534331	900
Brazil, milreis.....	13.8348	916 2-3
Austro-Hungary, florin..	10.455417	900
Holland, guilder.....	10.370543	945
British India, rupee.....	8.218298	916 2-3
Scandinavia, krone.....	6.9141	900
Germany, mark.....	6.1458	900
France, franc.....	4.978128	900

The variableness of the weights and fineness of these coins above indicated necessitates accurate computations in order to ascertain the precise exchangeable value of these moneys of account. These computations, however, are readily obtainable in the form of tables, and being based upon fixed data the tables are relied upon in exchange operations without question or attempt at verification.

At the beginning of every quarter of the year the director of the United States mint makes public a statement of values in United States currency of foreign coins, for the purpose of establishing uniformity in the calculations of duties upon importations of merchandise entered at the various custom houses. There is, of course, no variation in the valuation of gold moneys of account, the weights and fineness being established by the laws of the countries issuing these coins. There is, however, more or less variation in the values of silver moneys of account, caused by the fluctuation in the price of the metal in response to the law of supply and demand. The following table shows the value April

1, 1902, of the gold coins of the various countries above named:

Country and monetary unit.	Value.
Egypt, pound (piasters).....	\$4.943
Great Britain, pound sterling.....	4.8665
Turkey, pound.....	4.44
Russia, rouble.....	0.515
Portugal, milreis.....	1.08
Uruguay, peso.....	1.034
Argentina, peso.....	0.965
Chili, peso	0.365
Brazil, milreis.....	0.546
Austro-Hungary, crown.....	0.203
Holland, guilder.....	0.402
British India, rupee.....	0.324
Scandinavia, krone.....	0.268
Germany, mark.....	0.238
France, franc.....	0.193

It may be noted that Italy, Greece, Roumania, Bulgaria, Servia, Spain, Switzerland, Belgium and Finland have monetary units under different names, each of which is of the value of the French franc—\$0.193.

The intrinsic value of the gold monetary units of the chief commercial countries are fixed by law. In Great Britain the value of gold is established by the act of Parliament of 1844, known as the Peel act. This law makes it obligatory upon the Bank of England to purchase with its notes, all the gold that may be offered to that institution at the fixed minimum price of £3 17 shillings and 9 pence per ounce standard, which standard is 11-12 fine, or 91666+ parts of pure gold in 1,000 parts. While the price of gold may be advanced by the Bank or in the mar-

ket either in response to a demand for the metal or with the object of retarding its withdrawal for export, the price does not decline below this limit. Moreover, Great Britain being the chief commercial nation, indirectly establishes, through this fixed minimum price for gold, the value of the metal in other commercial countries.

It is noteworthy that gold is the only commodity in the world the value of which is established by law. The price cannot be affected either by abundance or scarcity of supply. No matter how great may be the volume of the metal, so long as the act of Parliament of 1844 stands unrepealed, or without modification, gold will find in the Bank of England a purchaser at the price established by that law. And, moreover, though there is no international agreement to maintain this price, the fact that gold is accepted by the chief commercial nations as the one universal measure of values, operates to prevent any attempt to change its valuation. Hence the gold seeker in South Africa or anywhere upon the face of the globe has an incentive to prosecute his search, by the knowledge that the metal which he seeks or has secured can be readily sold at any Government assay office or mint at the equivalent of the above-noted Bank of England price for the metal. The goldseeker may be, and often is, compelled to accept a lower price at the nearest market by reason of the cost of transportation from the mine or placer, or market, to the Government mint or assay office, but this is the only reduction that can be made in its value. Diamonds, which are much more valuable than gold, may be, and indeed, are, depressed in price by over supply in the market,

and it has been only through the regulation of the output by wealthy syndicates that these gems have not been greatly cheapened, since the discoveries of the deposits in the Kimberly mines. Thousands of ounces of gold have, however, been obtained from the Witswatersrand, a few miles distant from the diamond deposits, and the price of gold has been maintained without the least variation.

While the act of Parliament fixes the value of gold in Great Britain and, indirectly, in other European commercial countries, the value of the metal is maintained at a closely corresponding price in the United States through the operation of statutes passed by Congress, which established the weight and fineness of our monetary unit. The act of January 18, 1837, declared that the standard of fineness of the gold and silver coins should be 900 parts of pure metal and 100 parts of alloy. The weight of the gold eagle (\$10) was fixed at 258 grains of standard, or 232.2 grains of pure gold. The act of March 3, 1849, provided for the coinage of a gold dollar of 25.8 grains, which should be the unit of value, and the standard of fineness established by the act of 1837 was preserved. Upon this basis of the weight and fineness of the monetary unit the price of pure gold per ounce was fixed at \$20.671834+. The calculation is as follows: 480 (grains to the ounce) $\div$ 23.22 grains of pure gold in a dollar = \$20.671.834+.

Similarly, other nations, notably Russia, France, India, Holland, Portugal, Spain, Austro-Hungary, Germany, Belgium, the Balkan States, Greece, Italy, Japan, the Scandinavian States, Chili, Peru and other South American countries, have from

time to time fixed the value of pure gold through the establishment of the fineness and the weight of their gold coins, so that now there is almost a general uniformity in the value of the metal, and where differences exist they are comparatively unimportant. With such uniform adherence to a fixed value for gold it would be impolitic for any nation to cause, through legislation, such modification of its coinage laws as would have the effect of changing the value of gold. Were the fineness or the weight of the coin to be increased by such nation because of a great abundance of the metal, as the result of new discoveries or of new processes of refining, the entire coinage of that country would have to be made to conform to the change, and this would doubtless be followed by an export of the higher-valued coins almost as fast as they could be produced at the mint. A change in the direction of lessening the value would be so improbable as not to be worthy of discussion.

Practical stability in the value of gold being assured for the reasons above noted, all values of commodities have one standard, as unerring as the standard for lineal measurement. Exchangeable values between various countries having gold monetary systems are easily computable, and exchange can be worked with tables which are of uniform accuracy. Exchangeable values between countries having gold and those having silver or mixed monetary systems are computed upon the basis of gold, the value of this metal measuring that of pure silver, which is treated as merchandise. Moreover, the market value of silver in all countries is established on the basis of the price in gold of the metal

in London for English standard .925 fine, which price is regulated by the law of supply and demand, and it is therefore variable. But calculation of rates for exchange between gold and silver standard countries is made with the aid of tables, thus facilitating the working of the exchange at all prices of the baser metal in the London market.

CHAPTER XXVI.

THE COUNTRY'S ACCUMULATION OF GOLD—WHILE EUROPEAN BANKS JEALOUSLY GUARD THEIR STOCKS OF THE METAL OUR TREASURY HOLDINGS THEREOF ARE UNPROTECTED BY RESTRICTIVE REGULATIONS—GOLD FOR EXPORT SUPPLIED AT ONLY NOMINAL CHARGE FOR BARS—FACILITIES EXTENDED TO IMPORTERS OF GOLD AT PACIFIC COAST POINTS.

The remark has often been made during the periodical export movements of gold to Europe that our stock of the metal is so greatly in excess of our requirements that the export of a few millions of the metal, more or less, need be viewed with no apprehension, as the gold can easily be spared. It is largely due to this indifference which has been manifested regarding exports of the metal that so much of it has at times been shipped abroad. If the export movement of gold were as promptly reflected in our money markets as such exports are in the principal markets of Europe the procurement of the gold for this purpose might be more difficult or at least be attended with greater cost to the shipper.

The imposition of restrictions upon the export of gold has been opposed whenever the suggestion has been made that this Government should, in self defense, increase the charges for export bars, at least

to as great a premium as that demanded by European banks when gold is withdrawn therefrom for shipment out of the country. The opposition has come principally from foreign bankers, who have claimed that when gold is required for the settlement of international trade balances it would be unjust to exact a premium for the metal. These bankers, however, do not seem to consider that there is any injustice in the exaction by the Banks of England or France of a premium upon the metal even when it is required for payment of debts. Moreover, this imposition of a premium by these banks is, seemingly, justified by the plea that they are private corporations, and, therefore, that they have a right to exact the best price possible for the metal, which may be needed for export, even though such export may be for the purpose of settling international obligations.

The premiums upon gold demanded by the Bank of England are graded according to the degree of urgency which exists for protecting the stock of bullion in the Bank. The range of such premiums is from a fraction of a penny per ounce above the normal price for gold bars—77 shillings and 9 pence—to 78 shillings. The Bank sells its American gold coins, of which it has more or less of a supply, and which it accumulates for the purpose of meeting requirements for export, and the price for these coins ranges from 76 shillings and 4 pence to 76 shillings and 9 pence per ounce. The bank discourages the export of sovereigns to such an extent that shippers refrain from attempting to procure such coins when they need gold for this purpose. The Bank of France refuses to exchange its notes for gold

when the metal is required for export, and the Bank imposes a premium ranging from 1 franc to 3 francs per thousand, or even a higher premium when gold is bought from the Bank for shipment out of the country.

In accordance with the United States mint regulations a charge of 4 cents per 100 dollars is made for what are known as commercial bars of gold, these varying in fineness from 990 to 997. The shippers are required to pay for the bars with gold coin, which coin, however, is freely procurable at the Sub-Treasury in exchange either for gold certificates or for legal tender notes. It will be observed that there is no restriction upon the withdrawals of gold for export. The shippers may exercise the option of taking gold coin, in which case no charge is made, and the coin is supplied in exchange for gold certificates or for legal tender notes. The only expense incurred by the shipper other than the premium on the bars is that of packing and removal of the gold from the Government repository. The charge of 4 cents per 100 dollars for bars is regarded by the mint authorities as only a fair exaction, and shippers make no complaint. This charge was made in order to induce exporters to take bars instead of coin, the cost of coinage and of transportation of the bullion to the mint being thereby saved to the Government. There is no profit resulting from the sale of the bars, as is the case with gold bought from the European banks, and our stock of the metal is absolutely unprotected by expensive exactions on the part of the Government.

This Government is not only liberal in its treatment of exporters of gold, but it is likewise liberal

with importers thereof, whether such importations consist of coin or of bullion. There were in 1901 brought across our Northwestern border about \$20,000,000 gold from the Klondike fields. This gold was bought by the importers at a cost in Dawson City or Atlin, British Columbia, of from \$16 to \$17 per ounce. The purchasers shipped it across the line, either to Seattle, Wash., or to San Francisco, there being no Government assay offices in British Columbia at which the bullion could be assayed and converted into fine bars. Most of the bullion was in the form of dust and grains, or nuggets, containing more or less silver and copper ore. The bullion was converted into bars at the above-mentioned American offices, the cost of the assay and parting was charged against the "melt" and the ascertained value, at the rate of \$20.67 per ounce for pure gold, was paid to the owner of the bullion with a check payable at any United States Sub-Treasury; the silver in the mass being also bought at current prices. This method of payment enabled the depositor of the bullion to save the cost of transportation of the coin disbursed for his deposit, he receiving at the Sub-Treasury in this city gold coin on presentation of his check. The importers of the \$12,000,000 gold from Australia which was received in 1901, on the arrival of the foreign coins at San Francisco, deposited the gold at the assay office in that city, and the importers were paid therefor with checks payable at New York; the importers were thus saved the expense of transporting the coin proceeds of their bullion across the continent.

The payment by the Government for the bullion from the Klondike and from Australia transferred

the ownership of the metal from the importers to the Treasury. The bullion was later converted into gold coin, and it was left in the custody of the assistant treasurer at San Francisco. Inasmuch as the year's operations of this character resulted in a supply of coin at San Francisco in excess of the needs of that section of the country, this accumulation of coin will eventually have to be transported to the East, either by mail at 60 cents, or by express at \$2 per \$1,000, and in either case the cost of transportation will be defrayed by the Government, thus practically increasing the cost of the metal. If, instead of being coined, the gold shall be left in the form of bars, the transportation of these bars will involve an additional expense, and possibly these identical bars may be sold to exporters at 4 cents per \$100, or at an actual loss to the Government. Thus by its above-noted liberal treatment of importers of gold the Treasury incurs a loss on its bullion purchases. In some cases the Canadian bankers who imported Klondike bullion have shipped the coin received for their checks to Canada, where American gold is needed for circulation, there being no mint in the Dominion.

CHAPTER XXVII.

TABLES FOR THE READY CONVERSION OF BRITISH INTO AMERICAN CURRENCY—ILLUSTRATIONS OF THE METHOD OF MAKING CALCULATIONS—THE USE OF DECIMALS IN STERLING EXCHANGE COMPUTATIONS—EXAMPLES FOR CONVERSION AND OF OPERATIONS IN INTEREST AND OF DUTY ON IMPORTATIONS.

In mercantile houses, and more particularly in those handling importations of goods from Great Britain and its colonies and dependencies, there is almost constant need for a ready reckoner of values stated in English money. The equivalents in American currency of the pound sterling and of the multiples thereof are easily computable; when values are also stated in shillings, in pence and in farthings, however, separate calculations are necessary for each transaction.

After the equivalent or par value in United States currency of the pound sterling was fixed by act of Congress in 1873, at \$4.8665, tables were prepared by the Treasury Department with the object of facilitating the conversion by customs employees, of pounds, shillings and pence into our currency on the basis of the English pound. These tables though sufficiently exact for the purpose intended, were not enough so for the larger operations of for-

oreign exchange houses, but for ordinary mercantile transactions they were found quite useful, and even in small exchange offices they are probably still employed. The following is the table for the ascertainment of the equivalent of the par value of multiples of the pound:

	0	1	2	3	4
1	4.8665	53.5315	58.398	63.2645	68.131
2	9.733	102.1965	107.063	111.9295	116.796
3	14.5995	150.8615	155.728	160.5945	165.461
4	19.466	199.5265	204.393	209.2595	214.126
5	24.3325	248.1915	253.058	257.9245	262.791
6	29.199	296.8565	301.723	306.5895	311.456
7	34.0655	345.5215	350.388	355.2545	360.121
8	38.932	394.1865	399.053	403.9195	408.786
9	43.7985	442.8515	447.718	452.5845	457.451
5	72.9975	77.864	82.7305	87.597	92.4633
121.6625	126.529	131.3955	136.262	141.1285	145.995
170.3275	175.194	180.0605	184.927	189.7935	194.6605
218.9925	223.859	228.7255	233.592	238.4585	243.3255
267.6575	272.524	277.3905	282.257	287.1235	291.9905
316.3225	321.189	326.0555	330.922	335.7885	340.6555
364.9875	369.854	374.7205	379.587	384.4535	389.3205
413.6525	418.519	423.3855	428.252	433.1185	437.9855
462.3175	467.184	472.0505	476.917	481.7835	486.6505

To ascertain the par value of any number of pounds represented by one figure, find the figure in the left-hand margin of the table and its value will appear in the adjoining column opposite the figure. For example, if it is desired to obtain the value of five pounds, by following the left-hand margin to the figure 5, there will be found \$24.3325. The value of 57 pounds is ascertained by following the line number five in the left-hand margin to column

seven, and there will be found \$277.3905. To ascertain the value of 576 pounds move the decimal point in the \$277.3905 one place to the right and it shows \$2773.905 as the value of 570 pounds. Then add the value of 6 pounds, \$29.199, and the result is \$2803.104. This calculation proves by the following: $\$4.8665 \times 576 = \$2803.1040$.

The equivalent or the par value of the English shilling in our currency is .243325 cents, and that of the English penny .0202766 cents. The following table shows the approximate value of every combination of shillings and pence, less than the pound sterling, the upper margin representing the shillings and the left-hand margin the pence:

	0	1	2	3	4	5	6	7	8	9
0	..	24..	48..	73..	97..	1.21..	1.46..	1.70..	1.94..	2.19..
1	..02..	26..	50..	75..	99..	1.23..	1.48..	1.72..	1.96..	2.21..
2	..04..	28..	52..	77..	1.01..	1.25..	1.50..	1.74..	1.98..	2.23..
3	..06..	30..	54..	79..	1.03..	1.27..	1.52..	1.76..	2.00..	2.25..
4	..08..	32..	56..	81..	1.05..	1.29..	1.54..	1.78..	2.02..	2.27..
5	..10..	34..	58..	83..	1.07..	1.31..	1.56..	1.80..	2.04..	2.29..
6	..12..	36..	60..	85..	1.09..	1.33..	1.58..	1.82..	2.06..	2.31..
7	..14..	38..	62..	87..	1.11..	1.35..	1.60..	1.84..	2.08..	2.33..
8	..16..	40..	64..	89..	1.13..	1.37..	1.62..	1.86..	2.10..	2.35..
9	..18..	42..	66..	91..	1.15..	1.39..	1.64..	1.88..	2.12..	2.37..
10	..20..	44..	68..	93..	1.17..	1.41..	1.66..	1.90..	2.14..	2.39..
11	..22..	46..	70..	95..	1.19..	1.43..	1.68..	1.92..	2.16..	2.41..

	10	11	12	13	14	15	16	17	18	19
2.43..	2.67..	2.92..	3.16..	3.40..	3.65..	3.89..	4.13..	4.38..	4.62	
2.45..	2.69..	2.94..	3.18..	3.42..	3.67..	3.91..	4.15..	4.40..	4.64	
2.47..	2.71..	2.96..	3.20..	3.44..	3.69..	3.93..	4.17..	4.42..	4.66	
2.49..	2.73..	2.98..	3.22..	3.46..	3.71..	3.95..	4.19..	4.44..	4.68	
2.51..	2.75..	3.00..	3.24..	3.48..	3.73..	3.97..	4.21..	4.46..	4.70	
2.53..	2.77..	3.02..	3.26..	3.50..	3.75..	3.99..	4.23..	4.48..	4.72	
2.55..	2.79..	3.04..	3.28..	3.52..	3.77..	4.01..	4.25..	4.50..	4.74	
2.57..	2.81..	3.06..	3.30..	3.54..	3.79..	4.03..	4.27..	4.52..	4.76	
2.59..	2.83..	3.08..	3.32..	3.56..	3.81..	4.05..	4.29..	4.54..	4.78	
2.61..	2.85..	3.10..	3.34..	3.58..	3.83..	4.07..	4.31..	4.56..	4.80	
2.63..	2.87..	3.12..	3.36..	3.60..	3.85..	4.09..	4.33..	4.58..	4.82	
2.65..	2.89..	3.14..	3.38..	3.62..	3.87..	4.11..	4.35..	4.60..	4.84	

To find the value of 17 shillings and 6 pence follow the upper line in the table until 17 is reached, then downward to the line six and \$4.25 will be found. The calculation made by multiplying .243325 cents, the value of a shilling, by .175 or seventeen and a half shillings results in \$4.2581875. It will be observed that while the computations for pounds in the first table are carried to the fourth decimal place the calculations for shillings and pence are extended only to the second decimal. In the process of verification, however, which a careful student should not neglect, the deficiency can easily be supplied. The above tables were prepared, as heretofore noted, for the use of computists of the values of imports, where such values were given in sterling money, and they were not intended to be employed in foreign exchange offices as substitutes for tables which have calculations for exchange covering a comparatively wide range. Indeed, the computations are wholly confined to the equivalents in our currency of multiples of the pound sterling and divisional parts of the pound in shillings and pence showing the value of such divisional parts based on the par of exchange between this country and Great Britain.

In calculating exchange, decimals, instead of fractions seem to be preferable because thereby greater accuracy can be attained and, moreover, in large transactions it is desirable that the computations shall be carried to the farthest possible point. Most of the European countries have adopted the decimal monetary system, thus facilitating calculations, and, indeed, this system is in use almost everywhere except in Great Britain and its colonies

and dependencies. The table of English money is: 4 farthings one penny, 12 pence one shilling and 20 shillings one pound. There are 960 farthings, 240 pence and 20 shillings to the pound. Additions in British money involve the carrying of odd farthings to pence, of pence to shillings and of shillings to the pound, a somewhat complicated process for those unaccustomed to its use. The process of subtraction in English money is equally complicated, but these complications can be obviated by first converting the shillings, pence and farthings to decimals of the pound.

Conversion of English money into decimals is a simple process. The shillings, according to the rule in Brooks, are multiplied by 5, each shilling being five-hundredths of a pound. The pence are multiplied by .004 1-6, one penny being 1-240th or 4 1-6 thousandths of a pound. The use of the fraction 1-6 can be avoided by adding 1, if the result is over 12, and 2 if the result should be over 35. The following example is given for the reduction of £525 10s. 6d. to pounds and decimals of a pound: £525 = £525 .10s = .50 and 6d. = .025. The decimal is £525.525. To convert this sum of English money, £525 10s. 6d. into United States currency reduce the shillings and pence to the decimal of a pound, or £525.525, as above, and multiply by the rate for exchange which, in the example given, is \$4.96½ or \$4.9650. The result is \$2.609.2316250, or \$2.609.23. In the reverse process, the conversion of United States currency into pounds and decimals of a pound, divide the amount in dollars and cents by the rate per pound and it will give the desired result. Then multiply the decimals of the pound by 20 and it will

show the shillings and decimals of the shilling. Multiply the decimal of the shilling by 12 and it will give the pence and decimals of pence. For illustration find the equivalent in English money of \$2,609.23 at \$4.96½. $\$2,609.23 \div 4.9650 = 525.5246$, $.5246 \times 20s. = \$10.4920$, $4920 \times 12 = d\ 5.9040$ or 6d. The answer, therefore, is \$525 10s. 6d.

The processes of calculating interest or per cent. in English money, as laid down in Brooks, involve the conversion of the shillings and pence into the decimals of the pound and multiplying the result by the rate per cent.; then multiply the decimal of that result by 20s. and the whole number will be shillings. Multiply the decimal of the shillings by 12d. and it will give pence and the decimal of pence. For example to find the interest at 4 per cent. per annum on £550 15s. 11d. The decimal of 15s. is .75 and that of 11d. is .046, making the sum, decimally stated £550.796. This multiplied by 4 per cent. = £22.03184, the interest on the sum for one year. Reduce the decimal of the pound, .03184, by multiplying by 20 and the result is s. 0.63680. Multiply this decimal by 12 and it gives d. 7.64160. The answer, in pound, shillings and pence is £22 0s. 8d.

To find the advalorem duty on importations expressed in English money, the value of the goods being £550 15s. 11d., and the duty 30 per cent. The decimal of the above value is £550.796. Multiply by \$4.8665, the par of exchange, gives \$2,680.4487340, the cost of the goods, not including duty. \$2,680.45 multiplied by 30 per cent. gives \$804.1350 duty. Add this amount to \$2,680.45 and the result is \$3,484.57 cost of goods including duty.

APPENDIX.

FOREIGN EXCHANGE ELUCIDATED.

The following lecture, delivered June 5th, 1902, by Mr. H. K. Brooks of the American Express Company, before the students of the University of Chicago, was deemed so appropriate, as illustrating previous chapters, that it is published verbatim:

Foreign exchange transactions are generally regarded as being quite complicated, and although there are some operations requiring experience and patient study, the system, as a whole, cannot be said to be any more intricate than many of the problems daily arising in mercantile business.

The reason of there being so few, comparatively, who have a thorough knowledge of the subject, may, perhaps, be attributed to the fact that, until recent years, the business was confined to the leading banks at large trade centres. Other banks, having call for foreign drafts, letters of credit or other foreign paper, would obtain same from the large banks mentioned or refer customers to them direct.

The enormous growth of our import business, the large increase in foreign travel, and the extension of our trade to nearly every country of the world, so greatly increased the volume of foreign exchange transactions, it naturally invited competition, and to-day almost every bank and financial institution at a place of any importance is equip-

ped with the facilities necessary to meet the demand for this class of business of its patrons.

Merchants who formerly imported goods from foreign countries through brokers at seaport cities, now have foreign departments for the transaction of the business direct. Our manufacturers, who formerly did not think of looking beyond the limits of this country for a market for their goods, have learned, through a better knowledge of the conditions, that they can successfully compete with foreign manufacturers. Our war with Spain is said to have opened the eyes of our manufacturers to the fact that there was a vast population outside of the United States who were dependent for many commodities, upon countries who were in no better position, geographically or otherwise, to supply their needs; and if we judge from the large increase in our exports since the war, there was, no doubt, some foundation for the statement.

In an article recently published in one of the leading financial papers—"The New York Financier,"—it was stated the demand among bankers and large mercantile houses for young men having a general knowledge of foreign exchange and foreign shipping very greatly exceeds the supply—that students fitting themselves for mercantile life should devote as much study as possible to this branch, since it would be a very valuable acquisition to their fitness for the present commercial business, and at the same time, insure a higher appreciation and greater salary for their services than usually paid for other branches of either mercantile or banking business.

The Term "Foreign Exchange."

Foreign exchange is a system by which commercial nations discharge their debts to each other. This indebtedness may represent the value of commodities exported to or imported from other countries, money borrowed, loaned, or invested abroad, and the interest or profits on such funds. The cost for transportation of goods and the commissions for service. The expense incurred in traveling in

foreign countries. In fact any transactions which involve the remitting of money or anything representing money from one country to another. These debts have to be paid, either with cash or something equally satisfactory to the creditors. The cost of transmitting gold or currency and the risk attending same, while sometimes resorted to, is generally considered too great, and it is to avoid this risk and expense that the system of exchanging debts through the medium of commercial paper is adopted.

One can hardly appreciate the magnitude of the business between the United States and foreign countries, which, directly or indirectly, is transacted through the medium of the system we term foreign exchange, without resorting to actual data in the shape of figures, and we find these figures so large as to be almost incomprehensible.

For the twelve months ending December 31st, 1901, the value of the goods or commodities exported from this country to other countries amounted to \$1,465,500,000, and during the same period the United States imported from other countries goods to the value of \$880,400,000, making a total of exports and imports during the year 1901 of \$2,345,900,000, a sum which if in \$1 bills fastened together at their ends, would make a band nearly 260,000 miles long.

The value of the goods we exported exceeded the value of those imported by \$585,100,000, which amount of credit in our favor, would, had there been no other transactions to offset it, have to be remitted to us from the various foreign countries. But against this credit in our favor, foreign countries charged up to us the amount paid out on letters of credit used by our people to meet expenses in travel abroad—balance due on loans made by our capitalists to float some of the larger enterprises, such as railroad consolidations, the United States Steel Corporation, etc., so that notwithstanding there was a large balance due us in the difference between the value of the goods we sold to, and those we purchased from, foreign countries, it was entirely offset, and more too, by other transactions. In fact,

during the year 1901 we exported \$3,348,000 more gold than we imported. But whether the balance be in our favor or against us, the total amount of the business transacted is practically all handled through the medium of the system we call foreign exchange and the importance of a thorough knowledge of the system in its various details, is becoming greater each year.

The Monetary Systems of Foreign Countries.

A knowledge of the money of account or monetary systems of the various foreign countries is one of the first things necessary to a clear understanding of foreign exchange transactions.

Paper money, such as government and bank notes and certificates, are, as a rule, intended solely for circulation within the country in which issued, and are not legal tender outside of the country in which they emanate. Of course, paper money is often accepted in small amounts for its full face value in other countries, but it is always optional with the creditor in accepting it.

Silver and minor coins are also intended for domestic use, and when accepted in other countries, it is at their actual value rather than at their face value. For illustration: The purchasing power of the silver dollar of the United States within this country, is as great for small sums as the gold dollar, but in other countries it would only be accepted for its bullion value. The Mexican dollar, which passes for its face value in Mexico, is worth less than fifty cents in this country.

Gold, by virtue of commercial usage and the laws of the various countries of the world, may be said to be the only international money, and its purchasing power is practically the same throughout the civilized world. But, bear in mind, the value of gold coins is not always as expressed on their face. In large international transactions the weight of the mass is regarded and not the number of pieces, and their value depends upon the weight and fineness. By fineness is meant pure metal. Nearly all coins

contain alloy or inferior metal which is added to increase their durability.

The value or price of the gold money of account of commercial countries is determined by the weight and fineness of the metal contained therein, which weight and fineness are established by the mint laws of the country issuing the money. It is therefore essential that the standard of weight by which the various moneys of account are established shall be unvarying, and have the highest legal sanction; otherwise there could be no stability of values and no such thing as accurate deductions of pars of exchange. Gold is the only commodity in the world, the value of which is established by law.

Price of Gold.

The price of gold cannot be affected either by an abundance or scarcity of the supply. No matter how large the supply, our mints, or the Bank of England, will buy it at the price established by law, and although there is no international agreement to maintain the price, the fact that gold is accepted by the chief commercial nations at the one universal measure of values, operates to prevent any attempt to change its valuation. The price of diamonds, which are more valuable than gold, is affected by the supply and demand. Silver, used extensively as money, fluctuates in price like any commodity, the supply and demand governing its value.

As gold shipments between the United States and foreign countries, particularly Europe, are an important factor in foreign exchange transactions, it may interest you to know how they are handled and the expense attending same.

Whether in coined pieces or bars (bullion) it is packed in strong kegs or boxes, securely strapped with hoop iron, and carefully sealed with private seals; the latter to discover if tampered with en route. Space is chartered from the steamship company, as in the case for merchandise, although nearly all large fast steamers have rooms especially constructed for such valuable cargo. At a cost of about 3-16 of

1 per cent., or \$1,875 for each million dollars in value, the shipper has it insured against loss. The steamship company charge for carrying the shipment as freight, a rate of about $\frac{1}{8}$ per cent. of its value, or about \$1,250 for each million dollars, making a total cost of about \$3,125 per million dollars. As an extra safeguard in case of large shipments, the steamship company details special armed men to guard the room day and night, and sometimes the shipper employs special detectives in citizens clothes to watch the passengers on the trip, since it is generally known several days in advance when large shipments of gold are to be made.

In accordance with the United States Mint regulations a charge of four cents per \$100 is made for what are known as commercial bars of gold, which are from 990 to 997 thousandths fine. The shipper has to pay for these bars with gold coin which is obtainable without charge at Sub-Treasury in exchange for gold certificates, or for legal tender notes. There is no restriction upon the withdrawals of gold from the Sub-Treasury for export, and the shipper has the option of taking coined pieces if he prefers, but the loss by abrasion of coined pieces practically equals the cost of four cents per \$100 charged by the mint for commercial bars, which are put up in that shape to induce exporters to take bars instead of coined pieces, and thus save the government the cost of coinage as well as the transportation of the bullion to the mint.

Money of Account Foreign Countries.

I shall not undertake to tell you the names and denominations of all the coins or money used in the various foreign countries. It would take too much time, and you would not remember them. I shall simply give you the money of account of the principal countries. By money of account we mean the kind of money in which the people keep their accounts, as for example, we keep our accounts in dollars and cents.

North America.

Commencing with North America we have, in addition to

the United States, Canada, Mexico, Central America and we will include the West Indies Islands.

Canada.

Notwithstanding Canada is a British Colony, their trade relations with the United States were too important to admit of the adoption of the complicated British Monetary System, and they keep their accounts in dollars and cents as in the United States. No gold is coined, the United States "Gold Eagle" (\$10.00) and the British "pound" or "sovereign" are legal tender for all amounts.

Mexico.

Mexico's money of account is the Peso or dollar of 100 centavos or cents—worth 45 to 50 cents in our money. Being one of the chief silver producing countries of the world, the greater part of its coinage is exported to China, the Philippines and Central and South America, in which countries the Mexican Peso or dollar is the favorite coin.

Central American States.

The Central American states all have for their unit of money the Peso of 100 centavos—not exactly like the Mexican Peso, but more like the Peso of the South American States, which is similar to the French system—their unit being equal to about five francs.

West Indies Islands.

There are many islands comprising the group known as the West Indies Islands. Porto Rico as you know is owned by the United States, and Cuba until recently, practically controlled by us. At both islands efforts are being made to supplant the Spanish peseta with the American dollar as the money of account. Most of the other islands are possessions or colonies of European countries, and as a rule keep their accounts in the money of their mother country.

South America.

South America, Uruguay, Paraguay, Argentine Republic, Columbia and Chili use the Peso of 100 centavos as in Central America. Brazil uses the milreis of 1,000 reis, Peru the sol of 10 dineros, each dinero being equal to 10 centavos

or cents; Bolivia calls its unit the boliviano of 100 centavos, and Ecuador the sucre of 100 centavos. The value of their units in our money fluctuates, but is approximately fifty cents.

In drawing drafts on Central and South America and to some extent on Mexico, they are for United States' dollars payable in New York, which are, of course, cashed in the money of the country where payable, at the current rate of exchange on New York.

Africa.

In Africa, Egypt's money of account is the Egyptian pound of 100 piastres, which, although of greater value intrinsically, is worth less commercially than the British pound sterling. Algeria is a French colony, and uses the French system, and the same is true of Madagascar, the third largest island in the world.

Cape Colony, Etc.

Cape Colony, Natal, Sierre Leone and Zanzibar are British Colonies and use the English pound sterling as their unit, and the South African Republic (or Transvaal) and Orange Free State, where the English are having an interesting time trying to whip the Boers, do likewise to facilitate their commerce with adjoining states.

Oceanica.

In Oceanica, the islands of Australia, New Zealand, Tasmania and a portion of Borneo use the British pound sterling by reason of being British colonies, and Java and Sumatra, colonies of Holland, use the gulden or gilder.

Japan.

Japan's money of account is the yen of 100 sen—which formerly was worth about \$1, but in 1898 its value was reduced to about fifty cents.

Philippines.

At the Philippines, although now possessions of the United States, preference is given to the Mexican dollar as formerly, which is worth in our money from forty-five to fifty cents, according to the market price for silver.

India.

India or British India with its population of nearly 225 millions—three times that of the United States—has for its money of account the rupee of 16 annas—one anna being equal to four pice and one pice equal to three pie—not “the kind of pie our mothers used to make.” The value of the rupee in our money is about 33 cents. India being a very poor country, uses coins of very small value, the smallest coin (the pie) being worth about $\frac{1}{4}$ cent in our money.

Hong Kong.

Hong Kong is a small island just off the coast of China. Victoria, the capitol, and practically the only place there, has a population of nearly 200 thousand. Most of the trade of China with the rest of the world is done through Victoria, or, as we know it best, Hong Kong. The money of account of Hong Kong is the dollar of 100 cents, but as in other oriental countries, the Mexican dollar is preferred to the local currency.

China.

China has several kinds of money—the dollar of 100 cents—also a silver coin called “tael,” spelled tael; the latter varies in value according to the locality and the price of silver in London. But the Mexican dollars constitute the principal circulating medium. In fixing the valuation of the Haikwan tael for the purpose of adjusting the Chinese indemnity—resulting from the recent war there, the plenipotentiaries made the equivalent in American money 74 and 2-10 cents.

Like India, China is a very poor country, and the coins most extensively used are of very small value. They have a coin called “cash”—about the size of our silver quarter (25 cent piece) made of copper and zinc, with a square hole in the center—I suppose you have seen them. One thousand of these are issued on a string—that’s what the hole is for—the lot being equivalent to about \$1 in our money, or 1-10 of a cent each.

Europe.

I have now given you a general idea of the kinds of money in use in the countries of North and South America, Asia, Africa and principal islands of the Atlantic and Pacific Oceans. We now come to Europe—with which our financial and trade relations are of more importance than all the others combined.

France, Belgium, Switzerland, Italy, Etc.

France, Belgium, Switzerland, Italy, Greece, Spain, Roumania, Servia, Bulgaria, Finland and Austria Hungary have the same, or very similar, monetary systems—the first five countries named comprising what is known as the “Latin Union countries”—a union formed for the adoption of a uniform monetary system. The other countries adopted the same system, but are not members of the Union.

France, Belgium and Switzerland call their unit the franc, which is divided into 100 centimes. Italy calls the franc, or unit, the lira of 100 centesimi. Greece uses the unit named dracma of 100 lepta. Spain the peseta of 100 centimes; Roumania the lei of 100 bani; Servia the dinar of 100 paras; Bulgaria the lew of 100 stotinkas; Finland the finmark of 100 cents, and Austria-Hungary the crown or kronen of 100 heller. All these units are practically the same as the franc of France with different names—their actual mint valuation (except Austria-Hungary) being just the same, 19.3 cents.

Germany.

Germany's money of account is the reich-mark, or mark, as we call it, of 100 pfennige; a mark is worth about twenty-four cents in our money.

Norway, Sweden, Denmark.

Norway, Sweden and Denmark, known as the Scandinavian countries, have for their unit the kroner or crown of 100 ores—its value in our money being about twenty-seven cents.

Holland.

Holland has the gulden or guilder of 100 cents, worth about forty cents in our money.

Russia.

Russia uses for its unit the ruble of 100 kopecks, worth about fifty-two cents in our money.

Portugal.

Portugal, like Brazil, has for its unit the milries—equal to 1,000 reis—its value in our money being about \$1.08.

Great Britain.

Foremost among all nations of the earth in the magnitude of its commerce, its vast colonial possessions and dependencies, consequently its importance as the chief financial center, Great Britain furnishes the most interesting study of the money of the world. Every school child can tell you the money of account of Great Britain. What possessed them to adopt such a complicated, cumbersome system, is a mystery to nearly every one. The pound sterling is equal to twenty shillings, each shilling being equal to twelve pence, and each pence equal to four farthings. Without exception the sovereign is the most universally recognized coin, and except the Egyptian pound, it is the largest of units of money. Its actual value in our money is about \$4.87.

Probably more foreign exchange is drawn in sterling—here and in other countries as well—than in the monies of all other countries combined. This is due, however, to the fact that London is the financial center of the world, and exchange on that city is generally acceptable, if not preferred. For the same reason probably 90 per cent. of all letters of credit issued throughout the world, are drawn in English money.

Rate of Exchange.

The term "rate of exchange" means the value or the price of the money of one country reckoned in the money of any other country—the value being a fixed rate of exchange—the price a fluctuating rate of exchange.

The rate of exchange quoted between any two countries is for drafts, checks or bills of exchange, and the price includes, besides the actual equivalent of the standard coin, some allowance for interest according to the tenor of the draft, and a premium which the seller demands for the economy and superior conveniences of his draft or check as compared with a remittance in currency or bullion. This premium, which represents the fluctuation, is more or less according to the amount of exchange in the market for sale and the demand for same.

Two Kinds of Exchange.

There are two kinds of exchange—direct and arbitrated. Direct is when between any two countries, arbitrated, when between two places in different countries, through the medium of some other place in another country—or, to express it more clearly—the remitting of money to one country through another country or the buying of exchange of one country through another.

The occasion for the arbitration of exchange will arise when the rate of exchange here direct upon a country to which you wish to remit is much higher than between that country and another country nearby. For illustration: Through the financial columns of our daily papers, or by cabled information direct the rate for a check in London on Paris or Berlin, or vice versa, is furnished. It generally reads for example this way—"Exchange on Paris F. 25.12—Exchange on Berlin M. 20.42." This signifies you can buy in London for instance, a check payable in Paris at the rate of 25 francs 12 centimes per pound sterling, or on Berlin at the rate of 20 marks 42 pfennige per pound sterling. Therefore, if you had occasion to remit a large sum to say Berlin, and you found you could buy a check on London and have the amount remitted from London to Berlin cheaper than you could remit to Berlin direct, the transaction would be termed "arbitration of exchange." All large banking houses and jobbers of foreign exchange watch the quotation on exchange between countries very closely,

and always avail themselves of any advantage to be gained by remitting to one country through another.

Fluctuation in Rate of Exchange.

The fluctuation in the price of exchange, or, as it is termed, "the rate of exchange," is due to a number of causes. If the value of the goods we exported greatly exceed the value of the goods we imported during a certain period, the large balance due us from other countries would, if there were no other international transactions to offset same, cause the price of exchange here to be lower, for the reason there would be less demand for remittance to foreign countries, since it is always the difference between the debits and credits that is remitted. On the other hand, if we owed foreign countries a much greater amount than they owed us, exchange here would be higher by reason of increased demand for it.

But it is not alone our foreign commercial trade that regulates the price of exchange. The monetary conditions here and abroad may entirely offset other conditions.,

Rates for Money.

When the loaning rate for money here is high, capitalists and bankers will loan their money here, instead of investing in foreign commercial bills, which causes less demand for the bills, hence lower rates. If rates for money abroad are high, there will be a greater demand for commercial bills or other exchange on foreign countries, for the purpose of getting their money to those countries to take advantage of such high rates, thereby causing higher rates. If the rates for money abroad are lower than here, as was the case during nearly all of the year 1901, our capitalists and bankers would borrow money in their markets for investment here, thus increasing our indebtedness to foreign countries, and when such loans became due, there would be an increased demand for exchange to pay same, resulting in higher rates.

Discount Rates.

The discount rates at London, Paris, Berlin and other

European centers very materially affect the buying and selling price for commercial bills drawn against commodities exported. These discount rates are the rate per cent. at which commercial paper of the different classes may be discounted—that is the allowance made for cashing or taking up the paper before maturity or before due and payable. These discount rates fluctuate according to the conditions prevailing as does the rate of exchange. When discount rates abroad are high the rate for commercial bills here will be lower, and when low abroad the rate for commercial bills here will be higher.

Under normal conditions the rates for foreign exchange fluctuate between what are termed gold exporting or gold importing points, which means the actual cost of the gold plus the cost of transporting it from one point to another. For example: If you wished to remit say to London the equivalent of £50,000 (or approximately \$250,000), and you found that the cost of the gold coin or bullion and the expense of freight, insurance, commissions, etc., would be considerably less than the cost of a draft or check for the amount on London, then you would ship gold in preference. If the cost were equal or greater for shipping gold, then you would remit by check, as it would be more convenient and less risk, therefore the rates naturally do not go much above or much below the gold points.

When the rate for demand sterling exchange gets down to say \$4.83¾ to \$4.84 per pound, it is cheaper to import gold. If such exchange reaches as high as 4.88¼ to 4.88½ per pound, then gold can be exported equally cheap.

Supply and Demand.

But notwithstanding these various conditions which affect the market price for foreign exchange, it is the supply and demand that regulates the price, as in the case of wheat, corn, or any commodity.

Par of exchange means equal of exchange. There is a mint par of exchange, and also what might be termed a "commercial par of exchange."

The "mint par of exchange" between the United States and foreign countries is the actual value in our money of the pure metal contained in the coins representing the units of money of the various countries. The director of the United States Mint is required at stated periods in each year to proclaim the values of these coins or units in our money for the purpose of computing the worth of importations of goods and also the amount of customs duties assessable thereon. The value of gold coins as fixed by the director of the mint rarely ever change, since the weight and

fineness of the gold units of countries are fixed by law—in the United States by Act of Congress, in Great Britain by Act of Parliament.

The mint par of exchange of the English pound or sovereign in our money is \$4.8665, of the French franc and the franc of Latin union countries 19.3 cents, of the German mark 23.8 cents, of the Scandinavian kronor 26.8 cents, and of the Holland gulden or guilder 40.2 cents, and for many years it has been the same. While these values as furnished are not exactly correct, they are sufficiently accurate to serve the purpose intended and are accepted for all computations at the Custom Houses.

How to Find Pars of Exchange.

To determine the actual mint par of exchange between any two countries, it is only necessary to divide the weight of the pure gold in the gold unit of the one country by the weight of the pure gold in the coin of the other country. The mint par of exchange between the United States and countries having silver monetary units is arrived at in the same way, but as the price of silver fluctuates, the value of silver coins frequently change.

Illustration Between United States and Great Britain.

As an illustration of how the pars of exchange are arrived at, we will take for example the mint par of exchange between the United States and Great Britain. Our gold dollar (which is our unit or money of account) weighs gross 25.8 troy grains and is 9-10 fine, 1-10 alloy being allowed to increase its durability, which, if deducted leaves 23.22 troy grains of pure gold. The sovereign contains gross 123.274478 troy grains, and is 11-12 fine, which leaves the pure gold in the sovereign 113.001603 troy grains, which, if divided by 23.22, the pure gold in the United States dollar, gives \$4.866560, the mint par of exchange.

If you divide the value of the sovereign (\$4.8665) by 20 (there being 20 shillings to the pound), it will give you the actual value of the shilling in our money, or if you divide it by 240, the number of pence to the pound, it will give you the value of the penny in our money (a fraction over 2 cents).

Commercial Par of Exchange.

Now, as to the commercial par of exchange, if you add to the mint par of exchange between two countries, the cost of transferring the coin or bullion, which involves freight charges, insurance, interest, commissions, and sometimes discounts, you will arrive at what would be termed under normal conditions, the "commercial par of exchange," or,

the amount necessary to discharge a debt of a merchant in one country to a merchant in another country.

In further illustration of the commercial par of exchange, if the United States owed England exactly the same amount England owed us, the debts between these two countries could be paid without the intervention of money, and the commercial price of exchange would be at par. If, however, we owed England a greater amount than they owed us, exchange here would be higher, and in England lower, and vice versa. In other words, exchange in the United States would be at a premium, and in England at a discount, the premium in one case being about equal to the discount in the other.

Quotations for foreign exchange, such as checks, drafts, commercial bills, etc., are rarely understood except by those familiar with the business.

Quotations for Foreign Exchange.

In quoting the rate of exchange for drafts, checks, etc., on countries other than France, Germany, and sometimes Italy, the rate quoted is per single unit, that is, so much in our money per pound sterling on England, kronor on Norway, Sweden and Denmark, ruble on Russia, etc. Exchange on France and Germany when quoted by dealers at smaller places, would be the same, so much per single franc or mark, but in the larger cities, it is the custom, when quoting rates for francs, to quote the number of francs and centimes that will be allowed per \$1, as for example 5.15½—meaning that for each \$1 you would be allowed 5 francs, 15½ centimes. On Germany the quotation would be for four marks instead of one. For example, 95 5-16—meaning that for each four marks you would have to pay 95 5-16 cents. The allowance of ⅝ of a centime per \$1, considering that one whole centime is worth only 1-5 of a cent in our money, and a fraction like 5-16 of a cent in our money on four marks, no doubt seems to you like a very small item, but on a transaction of 100,000 francs (about \$19,400 our money) ⅝ of a centime per dollar would make a difference of over \$28, and 5-16 of a cent per four marks on 100,000 marks (about \$24,800), would be a difference of over \$78, or over \$15 on each 1-16 of a cent.

French Quotations.

One peculiarity in the French quotations is that the rate is always advanced or lowered by ⅝ of a centime; for illustration, the next lower rate to 5.15 would be 5.15½, then 5.16¼, 5.16⅞, 5.17½, etc., there being just ⅝ between each quotation. Bear in mind the greater the number of francs

and centimes allowed per dollar, the lower would be the rate, since as the quotation is per \$1, the more francs you would receive for your money. One reason assigned for this method of quoting the French franc, which is the reverse of that in other kinds of exchange, is that $\frac{5}{8}$ of a centime is equivalent to $\frac{1}{8}$ of 1 per cent. in the pound sterling, and as most of the French exchange was formerly covered or paid through English exchange, this method served a convenience in figuring. The other reason, which is given by "The Financier" of New York is, that as there are 5 francs to the dollar, $\frac{1}{8}$ of 1 per cent. on one franc would call for $\frac{5}{8}$ of 1 per cent. on 5 francs, the equivalent of \$1.

But these quotations on francs by $\frac{5}{8}$ of a centime, though they served every purpose a few years ago, are not now sufficiently close to meet the competition of the present day, and are supplemented with fractional quotations such as +515 $\frac{5}{8}$ —1-32, or 515 5-5—1-16, or 515 $\frac{5}{8}$ +1-32, etc. These plus or minus fractions do not apply directly to the rate, but mean 1-32, 1-16, 3-32, etc., of 1 per cent. plus or minus the equivalent amount in American money, which is added or deducted, as the case may be.

In a publication entitled "Foreign Exchange," recently issued by myself, furnishing conversion tables for foreign exchange transactions, I have undertaken to have adopted a method for quoting on French exchange, that would do away with those confusing fractional quotations, by supplying conversion tables for francs, the equivalent of \$1 by eighths of a centime. For example: instead of jumping from 5.15 to 5.15 $\frac{5}{8}$, which would now be the next lower quotation, the tables in this book are for 5.15, 5.15 $\frac{1}{8}$, 5.15 $\frac{1}{4}$, 5.15 $\frac{3}{8}$, 5.15 $\frac{1}{2}$ and then 5.15 $\frac{5}{8}$, which practically serve the same purpose, and avoid the complicated figuring of the fractions, plus or minus 1-32, 1-16 or 3-32, etc., of 1 per cent. mentioned, and I look for its general adoption in the near future.

German Exchange Fractional Quotation.

Quotations for German exchange, where quoted for 4 marks instead of a single mark, are also supplemented by the plus or minus fractional quotations, as for example: If 95 5-16 per 4 marks was thought a little too high, it will be quoted 95 5-16 minus 1-32 of 1 per cent., which, on a transaction of 100,000 marks would make a difference of about \$7.50.

In large transactions the quotations on English exchange (which are generally confined to eighths of a cent per pound), are often supplemented with the quotation plus 1.00, which means \$1 additional will be charged on each

1,000 pounds, making a difference of 10 points in the rate. That is, a quotation of $4.87\frac{1}{4}$ plus 1.00 would be \$4.8735, and it is not unusual in very large transactions to advance or lower the rate by 5 hundredths of a cent per pound, such as 4.87—4.8705—4.8710, 4.8715, etc., each five hundredths of a cent per pound making a difference of \$5 on each 10,000 pounds, or \$250 on a transaction of 500,000 pounds (nearly $2\frac{1}{2}$ million dollars in our money), often made by large financial institutions in a single day.

Newspaper Quotations on Foreign Exchange.

I have here a clipping from the Chicago Daily Tribune, quoting the rates for "foreign exchange." Under the heading "Foreign Exchange Market" it starts in by saying "foreign exchange" closed steady at the following rates. "Steady" means a fair demand and prices likely to remain as they are. "Firm" would mean good demand with prices tending upward; "strong," a large demand with prices certain to go higher. "Dull" or "weak" would, of course, mean very little or no demand, with prices tending lower.

Under the head of "selling" rates it gives:

Cable transfers, London.....	4.88
Checks, London	$4.87\frac{1}{2}$
Checks, Paris	$5.16\frac{1}{4}+1-32$
Checks, Berlin	.95 7-16
Checks, Holland	$.40\frac{1}{4}$

Selling rates, in this case, mean the prices that were charged customers who wished to remit abroad.

The first item, "cable transfers," is where amount of money desired to be paid abroad is deposited here, and the bank or concern with whom you are transacting the business cables its correspondent abroad to pay the amount to the person at the address you designate. Of course, it would be necessary for those making such transfers to have funds or credit abroad for such purpose. Where it is desired to have money paid at interior places, the cablegram will be sent to the nearest city at which the bank or concern here has funds, and it will be forwarded by mail from there, causing a delay of perhaps only a few hours. Ordinarily, within one or two hours from the time you deposit the money here it will be paid to the person abroad whom you designate.

The quotations for checks London, checks Paris and checks Berlin, are the rates at which they would have sold you a demand check or draft payable at those particular cities. If you had wanted a check payable at some other point in Great Britain, France or Germany, they undoubtedly would have charged you a higher rate, since their

balances are kept only at principal trade centers, and their arrangements for payment of their paper at interior or other points are that the bank correspondents there will honor their paper and reimburse themselves by drawing upon the trade centers for the amount plus their commission for cashing, hence adding to the cost of performing the service.

The next item is "checks Holland 40¼." This means they would charge for a check or draft on any point in Holland at the rate of 40¼ cents per gulden or guilder, the money of that country.

Following the above there appears in this clipping the heading, "Buying Rates," which means the rates at which the banks purchased the various classes of commercial paper named. The quotations are as follows:

60 days London bankers.....	4.84¼	
60 days London documentary.....	4.84½	
3 days Antwerp.....	5.18⅛	-1-32
3 days Hamburg.....	.95¼	+1-32
60 days Holland.....	.39	15-16

London Exchange.

The first quotation, "60 days London bankers 4.84¼," is for drafts drawn by bankers payable 60 days after sight (meaning after acceptance abroad), against their account in a bank upon which draft is drawn. The banker issuing such draft has 60 days (if necessary) in which to place funds abroad to meet payment of this draft, therefore a bank will often sell its 60 day draft with the belief that it will be able to purchase and place the amount abroad to meet same before draft is due, at a lower rate than at which it sold, and thus make a profit. There are other cases where a bank will sell its 60 day draft on the market to obtain the use of the money for that period.

The next item, "60 days London documentary 4.84½," is what is known as a foreign commercial bill of exchange, which I will explain more fully later. The documents referred to are the bills of lading and the insurance certificates, representing a shipment of goods abroad. The draft is drawn payable 60 days after sight, which is the time credit extended to purchaser by the seller..

The 3 day quotations mentioned on Antwerp and Hamburg are for drafts payable three days after sight. The custom of drawing drafts three days after sight on points in European countries outside of Great Britain, is because no days of grace are allowed on the Continent as in Great Britain, and the three days are granted to insure payment being

made, and thus avoid "protest fees," which often are very exorbitant.

The sixty days Holland bills are issued and paid under practically the same conditions as the sixty days London bankers just mentioned, although drawn against commodities exported. They are what is termed "Clean Bills," by reason of there being no documents attached.

Discount Rates, London, Paris, Berlin.

I have also clipped from the paper the following items which pertain to foreign exchange transactions: Under the head of "Money Markets of the World," it reads, discounts at London $2\frac{3}{4}$ per cent., Paris 2 7-16 per cent., Berlin $1\frac{5}{8}$ per cent. Foreign discount rates mean the rate per cent. charged or allowed on drafts discounted or paid before due. These particular rates mentioned apply to drafts drawn on bankers.

Here is also another newspaper clipping: "Sterling exchange—posted rates 4.88, actual rates $4.87\frac{1}{4}$, documentary rates 4.84. Posted, or nominal rates are those posted daily on bulletins of leading New York dealers in exchange for use of the general public, and apply more particularly to smaller sums. Actual rates are inside terms made to brokers or large buyers for large sums. Documentary rates are for commercial bills of exchange.

New York Exchange.

Here is another newspaper quotation, which, while not applying directly to foreign exchange, materially affects the rates for same in the Western market: New York exchange—30 cents discount before clearings, 40 cents discount after clearings. The expressions, before and after clearings, mean before or after the meeting of the bank clearing house, a meeting held each day about 11 A. M. by representatives of the different banks to exchange debits and credits with each other. New York exchange means checks payable by a bank in New York. 30 cents discount in this case, would mean that New York exchange, in sales between banks (not as a rule with the public), a check would be sold at a discount of 30 cents per each \$1,000. If New York exchange were quoted at a premium of 30 cents, they would charge 30 cents additional per \$1,000. The reason the rates for New York exchange affect the rates for foreign exchange in the West, is that the rates in the West and elsewhere in the United States are based, or, I might say, controlled, by the rates in New York, because New York is the principal buying market, therefore if New York exchange here is at a discount, on large transactions

banks would sell you a draft on London or other foreign cities at rate of 30 cents per \$1,000, less than you could buy it in New York, or if at a premium the rate would be that much per \$1,000 higher than New York rates, providing of course you paid in cash or local funds.

Foreign Commercial Bills of Exchange.

The basis of a foreign bill of exchange is, as its name implies, a commercial transaction of international character, which consists in the purchase of goods or commodities in one country for export to another country. The draft represents the money value of the goods which is due the exporter. The bill of lading is the contract between the transportation company and the shipper for the carrying of the goods and also serves as the order for their delivery. The insurance certificate is the certification of the Marine Insurance Company of reimbursement in case goods are lost by fire or accident while en route on the ocean. These three documents—the draft, bill of lading and insurance certificate, comprise what is termed a foreign commercial bill of exchange. They are almost invariably issued in duplicate for fear one set may be lost in its transmission abroad by mail—one of each set being marked original, the other duplicate—or sometimes one of the drafts will read “First of Exchange,” the other “Second of Exchange.” Foreign commercial bills of exchange are also known as “documentary bills of exchange,” by reason of the bill of lading and insurance certificate accompanying the draft. It is customary to send the originals of the three documents by first steamers, the duplicates or seconds by following steamer. If the original set is lost, the duplicate will serve the same purpose.

Similarity of Domestic and Foreign Trade.

Trade between countries may be said to be conducted in a manner somewhat similar to that employed here between cities or towns, except that the method of payment or reimbursement to the shipper necessarily differs by reason of greater distance, the difference in kind of money used, and commercial customs in the two countries. To obtain payment for goods shipped to a foreign country which perhaps would not arrive at destination for several weeks and possibly months, according to distance, and whether by fast or slow steamer, to say nothing of the fact that to some countries steamers only leave our ports semi-monthly or monthly, it is the usual custom of the shipper, whom we term the exporter, to sell his commercial bill of exchange against the shipment in advance to the highest bidder, and

he rarely experiences any difficulty in finding a ready purchaser.

Our exporters, in competing with foreign manufacturers, must take into consideration cost of transportation, insurance on goods, custom duties, difference in value of money and the probable price at which they can discount or sell their commercial bill against same. Time credit must also be extended to buyer. If our exporters had to wait for payment until maturity of their bills, it would mean the tying up of a large amount of capital and possibly prevent their competing successfully.

Process of Creation and Handling.

The process by which a foreign commercial bill of exchange drawn against commodities exported is created and handled and reaches its termination, may be best illustrated by an actual transaction, and I have obtained for such purpose exact copies of a commercial bill of exchange drawn against a shipment of flour made by a leading exporter—flour being one of our chief exportable commodities.

The shipment of flour in question destined to Liverpool, England, was delivered to the Soo freight line at Minneapolis, operating over the Minneapolis, St. Paul and Sault Ste. Marie and Canadian Pacific railroads, and a through bill of lading in duplicate was obtained. This through bill of lading is a form of contract, issued by special arrangements with connecting ocean steamship lines, by the terms of which it is agreed, under conditions printed thereon, to transport the shipment through to destination at foreign port (Liverpool). It states the number of packages, how they are marked, their contents, the particular grade or brand of flour, and the name and location of party for whom goods are intended. It is negotiable only by endorsement of the exporter.

Upon presentation of this evidence of shipment a marine insurance company has issued a certificate of insurance under terms of which they agree to reimburse the owner of goods in case of the loss of shipment by fire or accident while en route on the ocean. This shipment, as is the usual custom, is insured about 10 per cent. in excess of its billed value.

The exporter then attaches to these documents a draft for amount for which flour was sold, namely, £457 12s 10d. Had this shipment been destined to a point in Germany, the draft would have drawn in marks. If to France, in francs, etc. Usually in the money of the country where it is going, but quite often it will be drawn in English money al-

though going to some other country, by reason of English exchange being preferred.

In this case the exporter agreed to allow the buyer 60 days time in which to pay draft, after its presentation. The draft reads "60 days after sight of this first of exchange (second unpaid), pay to the order of ourselves 457 pounds 12 shillings and 10 pence," against Soo line through B. L. No. B. 1548, dated May 16, 1901, for 2,000 sacks of flour branded Dakota and is signed No. West'n Con's Milling Co. by H. E. Kent, cashier, who are termed the drawers. In the left corner it reads "To James Corwith & Co., Liverpool, Eng." They are the buyers, or, as we term them, the drawees.

Now these three documents, drawn to the order of the exporters (No. West'n Consolidated Milling Co.) comprise a commercial bill of exchange.

Upon the same day that these documents were issued, and practically before the flour has started on its long journey, the exporters offered this bill of exchange for sale. It was sold to the Security Bank of Minneapolis (they being highest bidders) at the rate of 4.84 per pound, who in turn resold it to the American Express Company at \$4.84½ per pound. The indorsements on the back of the draft read:

Northwestern Consolidated Milling Co., H. E. Kent, treas.

Security Bank of Minnesota, Thos. F. Hurley, cashier.

Pay to the order of the National Provincial Bank, Liverpool,
By Jas. F. Fargo, Treas.

The latter indorsement shows the papers to have been sent to Liverpool for collection. The bank at Liverpool notified Corwith & Co. to call and accept the draft, which they did, by writing the word "accepted" and the date over their signature.

About fifteen days afterward the flour arrived by slow steamer, and being in immediate need of it, Corwith & Co., in order to obtain the bill of lading, had to pay the draft; the instructions stamped on same being: "Surrender documents upon payment only."

Now as Corwith & Co. paid this draft forty-five days before it was due, the bank, as is customary, allowed them the prevailing rate of discount applicable to that class of bills, which was 2 per cent. (or £1 3s 5d). The difference, £456 7s 5d, less cost of revenue stamps, was placed to the credit of the American Express Co. by the bank, which closed the transaction.

Had the instructions on draft read: "Surrender documents upon acceptance of draft," the bill of lading would have been delivered when draft was accepted, thus enabling

Corwith & Co. to obtain goods at once and pay draft 60 days afterward if they desired.

The method used in determining what this commercial bill was worth when buying it here was based as upon the following:

1st. What demand exchange upon Liverpool could be sold for.

2d. The cost of revenue stamps to be affixed when draft was accepted abroad.

3d. The interest for the number of days for which draft was drawn, plus three days grace, at the rate per cent. bill could be discounted.

For illustration:

\$4.8775	Demand rate on Liverpool.
.00244	Cost of revenue stamp (1-20 of 1 per cent. of rate or 1 shilling per 100 pounds).
\$4.87506	
.01676	Interest 63 days 2 per cent. (discount rate).
\$4.85830	Parity or cost per pound at maturity or if discounted.
4.84125	Rate per pound at which purchased.
.01705	Profit per pound.
Or \$7.78 on £457 12s 10d.	

Buying Foreign Bills of Exchange.

The buying of foreign commercial bills of exchange is the principal medium of bankers and foreign exchange dealers, in placing funds to their credit in banks abroad against which they issue checks, drafts, letters of credit, etc. It is the foundation of most of our foreign exchange transactions. It is the principal source of profit in the business. It enables manufacturers to sell their goods abroad for cash in advance.

Foreign bills of exchange vary as to conditions of payments abroad. If conditions of sale between buyer and seller of the goods was that goods were to be paid for upon delivery, the instructions accompanying the bill would say "Documents for payment" (expressed d. p.), meaning not to deliver the bill of lading (which would enable drawee to get goods) until draft had been paid.

If instructions said "Documents for acceptance" (expressed d. a), it would mean bill of lading could be delivered when draft was accepted, thus enabling drawee to obtain

goods at once and pay draft any time within 63 days (if a 60 day bill).

The buying of commercial bills of exchange can only be safely undertaken by those thoroughly familiar with that business. It is practically equivalent to loaning money upon security you have not seen. If the drawee of the bill has unquestionable responsibility, that of course eliminates the principal risk of loss, but if great care is not exercised in examining bills purchased, a slight imperfection or error might cause a long delay in adjusting the error, thereby causing loss of interest. If through a misunderstanding or for other cause goods are not accepted, they have to be sold to best advantage for account of owner of the bill, and proceeds of sale are applied toward payment of the draft. If there is a deficiency, it is collected of the drawer of the bill—the exporter. The buyers of commercial bills should know the market value of the goods exported, the financial standing of the drawer or exporter, should see that bill of lading is correctly dated, corresponds with shipment made, is duly signed by agent or proper official of railway or freight line, that it corresponds with insurance certificate in the various particulars, that if more than two copies were issued he has them all, that there are no printed or stamped conditions thereon that would be likely to render it valueless under possible emergencies. If goods are perishable, see that they are routed by fast freight and fast steamers. If bill of lading only covers shipment to the seaport, as is sometimes the case when shipped from small inland places where through bills of lading are unobtainable, arrangements must be made through your own agent to have same exchanged for ocean bill of lading at seaport. Any error or incompleteness of the documents will cause a delay in payment or expense for cablegrams to adjust them.

Hypothecation Certificate.

It is the custom of large buyers of foreign commercial bills of exchange to exact of exporters what is termed a Hypothecation Certificate. This certificate, after describing the nature of the shipment and the documents in question, states in effect that the bill of lading is lodged as collateral security for the acceptance and payment of the draft. That in case the drawee declines to accept draft, or it is not paid at maturity, the owner of the bill is authorized to place the property described in the hands of brokers for sale for account of whom it may concern, and apply proceeds toward payment of draft and expenses incurred, and that in case of a deficiency the seller agrees to pay amount

on demand. Sometimes exporters give a general hypothecation certificate to apply to any and all bills of exchange purchased of them.

Certificates of insurance on shipments exported are usually for a sum of from 10 to 20 per cent. in excess of the stated value of the goods. They should be carefully examined to see that there is no clause which would render insurance void in event of shipment not going forward at a specified period, or that it would expire before arriving time of goods in case of delay or by reason of any of the possible emergencies likely to arise.

The buyer of foreign commercial bills of exchange must be familiar with the revenue laws and commercial customs of all the foreign countries, as well as the various rates of discount upon the several classes of paper as they change from day to day.

Discount for Certain Classes of Bills.

You should always bear in mind that a different rate for discount applies to the different classes of bills. For instance—on documentary bills where documents are for payment, the discount or rebate rate is 1 per cent. below the Bank of England official minimum discount rate. If drawn on firms (not bankers) and documents are for acceptance, the discount rate would be $\frac{1}{4}$ of 1 per cent. above the private discount rate for bankers' bills.

If drawn on bankers, whether documentary or otherwise (which are always for acceptance), the discount rate would be the private rate of discount, which fluctuates according to demand and supply of such bills, and in case of large transactions it is customary for buyers of such bills here to cable their correspondents abroad for a discount rate to apply on bills to arrive by next mail or for a stipulated period before buying, in order that they may know exactly at what rate the bills can be discounted upon their arrival. Without such previous arrangement the discount rate might change materially and result in loss upon the transaction.

Bank of England Official Rate.

The Bank of England official minimum discount rate is fixed by the directors of the Bank of England at their meetings upon each Thursday of the week, and their decision usually appears in the financial columns of our daily papers reading thus: "Bank of England minimum discount rate unchanged, or, the Bank of England increased (or reduced) its minimum discount rate to 3 per cent.," etc.

The private discount rate is the rate at which private

banks (meaning all those in Great Britain other than the Bank of England) will discount bills of exchange for account of the owners or last endorsers, and this discount is governed by the Bank of England discount rate, and also by the supply of bills in the market for discount, but except under unusual conditions, the private discount rate will always be about $\frac{1}{4}$ of 1 per cent. below the Bank of England official minimum discount rate.

What are known as "rebate rates" apply only to time commercial bills of exchange drawn on firms where documents are for payment; that is, where bill of lading is delivered only upon payment of the draft. This rebate is an allowance made to the payee or drawee from face amount of draft if paid before maturity, or before due, and such rebate is 1 per cent. below the Bank of England official minimum discount rate.

Theoretically the Bank of England controls the discount market in London. This control is sought to be maintained through the official rate of discount at the bank, which is advanced when its stock of gold bullion is being largely drawn for export to United States or European countries. If conditions prevail to make it inadvisable to raise the bank rate, a higher price for gold will be charged, or if it finds difficulty in controlling the discount rate, it will create a demand for discounts by borrowing on its security, thereby increasing the demands for discounts.

Unlike the Bank of England, which undertakes to control the stock of gold by advancing the discount rates, the Bank of France protects its stock of gold by increasing the price of gold when withdrawal of a large amount is threatened. The official discount rate of the Bank of France which controls the market rate, rarely changes except in case of financial or political crises.

Unsafe Foreign Bills of Exchange.

Cotton, on account of the different grades of same, and the fact that there is so great a difference in the price of the different grades, and its being so easy to substitute one grade for another, the bills against shipments of same should only be purchased of well known and responsible shippers or indorsers.

Grain shipments are all right, providing the grain inspector at shipping point is of good reputation, otherwise he might inspect as No. 2 what was billed as No. 1.

Perishable goods are always more or less risky, on account of danger of delay and goods spoiling. You should

see that perishable goods are sent by fast freight lines and fast steamers.

Pianos, organs, musical instruments, and such goods have imaginary values, and could rarely be sold at price at which billed.

Bankers Reimburse Bills.

Bankers reimburse bills is where drafts are drawn against a shipment exported, upon a banker, the documents being for acceptance. When buying such bills you should keep a record showing names of indorsers and keep close watch of the drawer or shipper until bill is paid. The shipper should be responsible, and if buying a considerable amount of such bills on the same drawee, you should ascertain through your correspondent abroad the responsibility of the drawee, and be sure you do not buy more bills against a single drawee than his ordinary business requirements would indicate he needed.

Banks selling commercial bills of exchange (documentary), sometimes stamp them, for example: "In case of need with the Bank of Scotland, London," or some other bank. This is done to avoid charge of intermediate banks for endorsing or protesting drafts, which charge is usually very exorbitant. When so stamped it is a notice to all holders of the draft they may call upon the bank named if draft is not promptly accepted or honored, for relief, therefore there is no necessity for protesting. The bank mentioned will, by previous arrangement, always honor such drafts and charge to account of the bank endorsing such notation thereon.

Clean Bills.

Clean bills of exchange are those having no bill of lading attached, although they may have attached the insurance certificate and an invoice of shipment. If these clean bills are drawn upon firms, they are subject to a discount rate of $\frac{1}{4}$ of 1 per cent. above the private discount rate of the day, but if drawn upon bankers, they will be discounted at the private discount rate.

Commercial bills of exchange drawn by exporters without documents are generally upon their own house or branch abroad, and are against funds which have accumulated to their credit from payments for shipments previously made. Exporters before selling their own bills of this kind usually wait until the rates for exchange here are high. Such bills are discountable.

Commercial bills of exchange drawn upon bankers are always for acceptance unless otherwise specified, and the

discount rate applying to such bills is the private discount rate of the day.

Bills That Cannot be Discounted.

Documentary commercial bills of exchange drawn upon firms or banks where documents are for payment, cannot be discounted upon the market, as in the case of such bills where documents are for acceptance for the reason banks abroad to whom bills are sent for collection will not undertake to discount commercial bills unless they are what is called "clean" bills—that is, those having no documents or those which permit the documents to be delivered when the draft is accepted by drawee.

A documentary or commercial bill of exchange, accompanied by instructions from the exporter or drawer, to deliver documents (bill of lading, etc.) only upon payment of the draft by the importer or drawee, which are drawn upon a firm, are subject to a discount rate of 1 per cent. below the Bank of England official minimum discount rate. If the instructions are to deliver documents upon acceptance of draft, the same rate of discount applies, unless the drawee is of very good financial standing, in which case the bill may be discounted by the holder (bank) at $\frac{1}{4}$ of 1 per cent. above the private discount rate of the day.

Foreign Revenue Laws.

Drafts drawn in the United States payable in foreign countries are subject to revenue laws of such foreign countries, and the cost of stamps so affixed abroad must be paid by the holder of the bills, who in turn generally charge to the bank or banker from whom they receive same for collection. The amount of revenue varies according to the country. The following shows cost on other than demand drafts in principal foreign countries:

Great Britain 1s per £100 or fraction thereof, or 1-20 of 1 per cent. of the rate.

Germany 50 pfennigs per 1,000 marks or fraction thereof, or 1-20 of 1 per cent. of rate.

France 50 centimes per 1,000 francs or fraction thereof, or 1-20 of 1 per cent. of rate.

Belgium 50 centimes per 1,000 francs or fraction thereof, or 1-20 of 1 per cent. of rate.

Holland 50 cents per 1,000 gulden or fraction thereof, or 1-20 of 1 per cent. of rate.

Norway, Sweden and Denmark 50 ores per 1,000 kroner or fraction thereof, or 1-20 of 1 per cent. of rate.

Italy $\frac{1}{8}$ per cent. of rate or \$1.13 per \$1,000.

Russia $\frac{1}{4}$ per cent. of rate or \$1.25 per \$1,000.

Austria-Hungary $\frac{1}{8}$ per cent. of rate or \$1.13 per \$1,000.

Switzerland varies at different places—some places have none.

The cost of revenue stamps required to be affixed to commercial bills in Great Britain at time of acceptance of draft is 1s. for each £100 or fraction of £100, which is equivalent to $\frac{1}{2}$ per mille, or $\frac{1}{2}$ per cent. per £1,000, or 1-20 of 1 per cent. of the rate, which latter expressed decimally when rate is \$4.83 per pound would be .00244 (or 488 divided by 1-20 of 1 per cent). Where the amount of bills is small, say £1,000 and under, it is safe to deduct $\frac{1}{4}$ cent per pound to cover cost of revenue stamps.

On short bills—5 days sight or less, only one penny stamps (2 cents) are required.

Banks abroad are noted for charging for every item possible in connection with every transaction handled. Such items as postage on letters sent to you during a certain period, cost of cablegrams, check books, envelopes, stationery, and often a lump sum for items that may have been overlooked. For collecting commercial bills of exchange they will usually charge—in England about 1-20 of 1 per cent., or 1 shilling per cent.; in France 1-16 per cent.; Germany 1-20 per cent. in the larger places and from 1-16 to $\frac{1}{8}$ per cent. in the smaller places.

Bill Sent Abroad by Drawer.

Exporters frequently draw bills of exchange and send the original bill of lading direct to the drawee abroad and attach the duplicate bill of lading and issuance certificate to the draft, which they sell upon the market. Such bills, if drawn upon merchants, are subject to a discount rate of $\frac{1}{4}$ of 1 per cent. above the private discount rate. The object of drawing bills in this manner is to avoid payment of internal revenue stamp duty of 2 cents per \$100, as required under our revenue laws.

Interest at 30, 60 or 90 days, with 3 days grace added (as allowed throughout Great Britain), can easily be arrived at by using printed tables furnished free by some of the leading foreign exchange bankers, which give the proper decimal of a pound to deduct for interest and revenue stamp at the various rates. These printed tables also give the same information for figuring German and French bills of exchange.

Exchange transactions become more complicated when one country or place, as is often the case, discharges its debts through another country by means of bills of exchange drawn upon a third country or place. As for in-

stance, a merchant in Chicago importing goods from China would pay the exporter in China with a check upon London, for the reason that such check would be more desirable to the shipper in China, since the demand for exchange in China is greater upon London than upon the United States.

When in any market the demand for exchange on a certain country or place is greater than the supply, the deficiency is usually supplemented by bills on other countries having a more favorable exchange with the latter.

In the East Indies, those who ship to America usually draw upon London instead of America. In New Orleans, exporters of cotton, etc., to Russia, draw upon London instead of St. Petersburg. This is because England does more business with those countries than America; besides, London is regarded as the greatest money center, and exchange upon that city is usually more favorable, and can be used to better advantage.

Importers in Germany.

Importers in Germany will not accept drafts drawn against importations, until the duplicate documents (duplicate draft, bill of lading, etc.), are presented, and in order to have the original draft accepted immediately upon its arrival, banks in this country when forwarding such bills for acceptance and collection will attach to the original draft a memorandum agreement to the effect that the duplicate bill of lading is in their possession, and their correspondents (banks) are requested to guarantee the acceptors (importers) that the duplicate documents will be delivered to them as soon as received, which guarantee also gives the number and amount of draft, the name of drawer and the signature of a proper official of the bank or financial institution forwarding same.

The volume of transactions in French, German and other continental exchange is quite small compared with that of sterling exchange. The reason for this is that most banks have accounts or balances only at London, and where balances are kept in other European cities they are usually small as compared with their London account. Therefore, in making remittances to Paris, Berlin or other cities on the continent, it is most generally effected by transferring the funds to those cities from London, which can generally be handled very satisfactorily, by reason of most large European banks having branches in London. It is customary, however, for banks, before transferring funds from their London accounts to carefully figure out the difference in cost between a remittance direct from here to the city where it is desired to place the funds, and the expense of transfer-

ring same from London. This can easily be determined by ascertaining the rate of exchange between London and the point referred to.

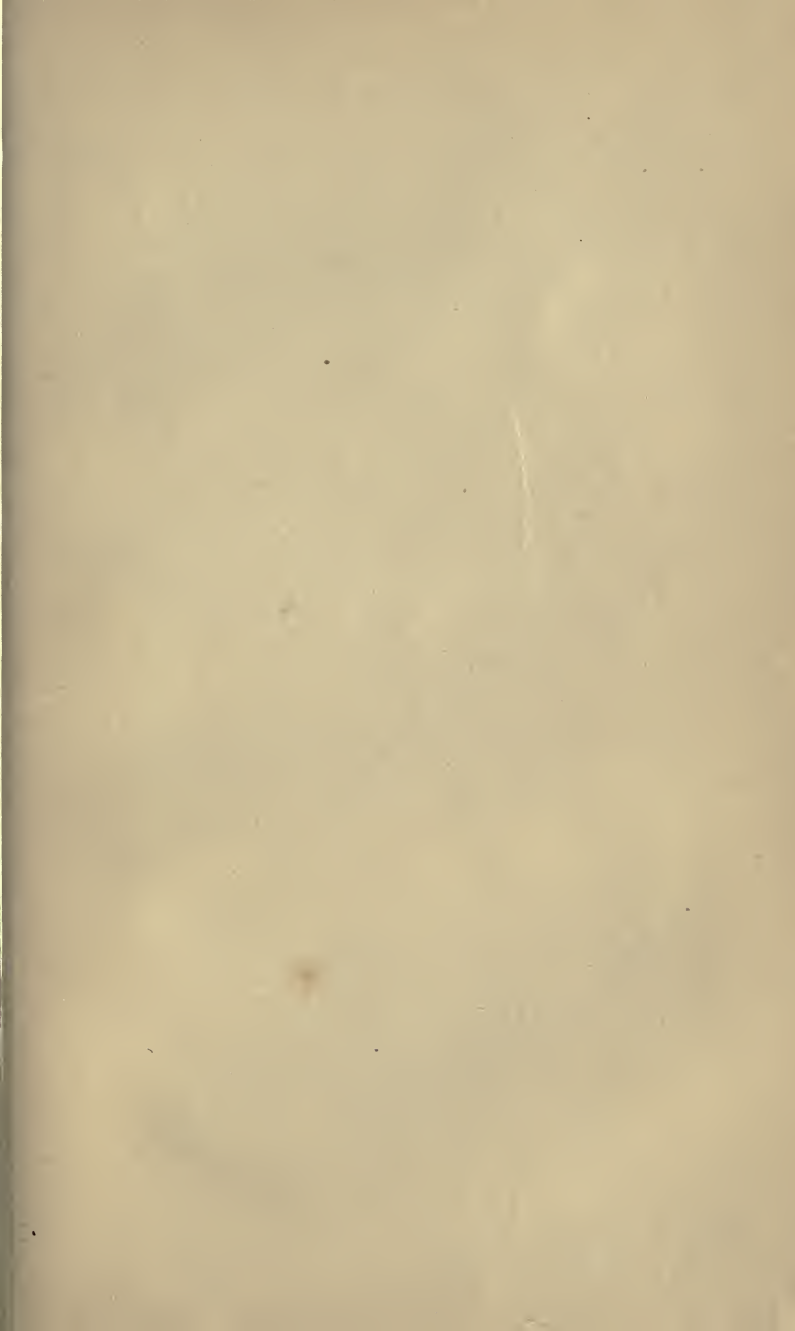
A crossed sterling check is one payable either to bearer or order, having the name of a banker or two parallel lines and the abbreviation & Co. written or printed across the face, thus: ===== & Co. The effect is to direct the bank upon whom it is drawn to pay same only when coming to them through some other bank. It is intended as an additional safeguard against wrong payment.

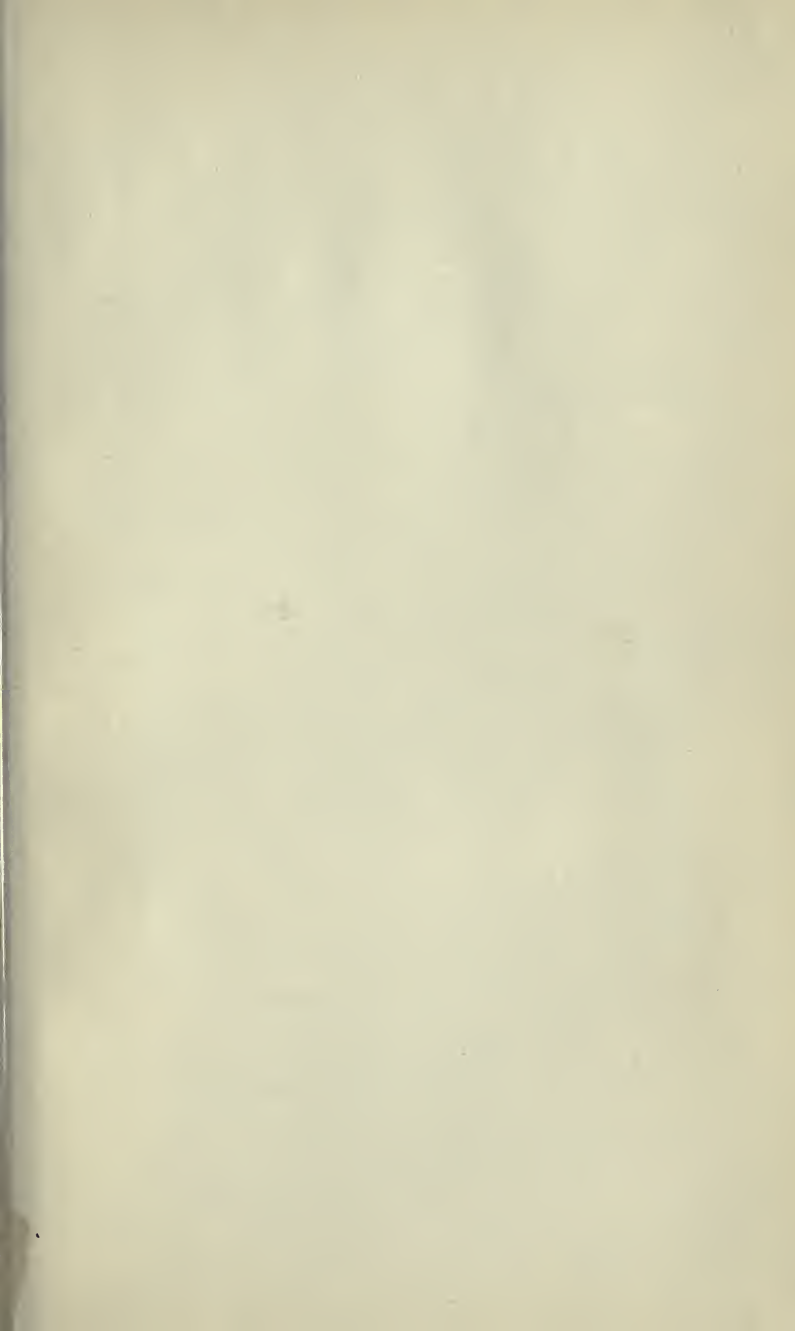
In most foreign countries it is the custom of bankers and others in the cashing of checks, whether drawn payable to order or bearer, to pay to the person presenting same, and under the laws existing in these countries, the paying bank or banker would not be held liable for wrong payment. As a reason for this seemingly risky method, it is claimed that on account of the very severe penalty imposed for forgery under their laws, the requiring of strict personal identification, as exacted by banks in the United States, is found unnecessary.

As an additional precaution against wrong payment, the laws of Great Britain require that where a check is crossed, as explained above, while not requiring personal identification, it must be cashed through some bank other than the one upon which it is drawn.

Notwithstanding the requirements under the laws, we presume a reasonable amount of care is exercised by banks to prevent losses by incorrect payment, and we are informed that in some countries, strangers presenting checks drawn to their order, are required to make affidavit that they are the person named, for which affidavit, the paying bank exacts a small fee.







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